Lower Thames Crossing

9.53 Comments on WRs Appendix H – Local Residents

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Lower Thames Crossing

9.53 Comments on WRs
Appendix H – Local Residents

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REP1-311 Alan Turner

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<tr><td rowspan="2">REP1-311</td><td rowspan="2">Alan Turner</td><td>WR:
WR link: REP1-311</td></tr>
<tr><td>
Overview:
REP1-311 raised issues on the following topics:
• Thames Chase Forest
The following table provides the Applicant's responses to those issues.
<table>
<tr><th>WR summary</th><th>Response</th></tr>
<tr><td>Concerns about the impacts on the Thames Chase Forest and proposed compensatory woodland</td><td>Thames Chase Forest Centre is located to the north of North Ockendon and to the south of Cranham, and straddles the M25 in this location. Permanent acquisition of land through the middle of the site (101,426m^2) adjacent to the existing M25 would be required to construct the new road and a diverted footpath which includes a new bridge. The Applicant proposes to provide replacement land.
Temporary possession of land and permanent acquisition of rights (30,214m^2) for diversion and modification of utility works (underground multiutilities and overhead power lines) would be needed on both sides of the M25.
Temporary possession of land (8,905m^2) at the western side of the M25 would be needed during the construction period to allow working room for construction activities.
The Project proposes replacement land directly to the north (Plot 44-19) and to the south (Plots 42-19, 43-04) of the existing Thames Chase Forest Centre, totalling 156,093m^2. An additional access from the new footbridge over the M25 reconnecting the east to the west of Thames Chase Community Forest and the wider environment.
The Applicant has been in discussion with Thames Chase Community Trust for 6 years about the impacts of the scheme which is being addressed through the Statement of Common Ground process [REP1-117]. Thames Chase Trust / Forestry England is satisfied with the replacement land in principle.
As such, the replacement land would be larger in quantity, equally or more accessible, useful and attractive, and its overall quality would be comparable. Therefore, it would be no less advantageous to the persons, if any, entitled to rights of common or other rights,</td></tr>
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</td></tr>
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				and to the public. Moreover, the benefits of the Project (including need) outweigh the loss of existing open space, taking into account the replacement land. Further details of these proposals can be found in the Land Plans (Volume B) [**REP1-009**] Environmental Statement (ES) Chapter 8: Terrestrial Biodiversity [**APP-146**], ES Figure 2.4: Environmental Masterplan [**APP-159 to APP-168**], the Design Principles [**APP-516**], and the outline Landscape and Ecology Management Plan [**REP1-173**].

REP1-321 and REP1-322 Claire Richardson

<table>
<tr><th>Rep ID</th><th>WR Submitter</th><th>WR/Overview/Applicant's Response</th></tr>
<tr><td rowspan="2">REP1-321
REP1-322</td><td rowspan="2">Claire Richardson</td><td>WR:
Summary: REP1-322
WR link: REP1-321</td></tr>
<tr><td>Overview:
REP1-321 and REP1-322 raised issues on the following topics:
• Need for Project / Route Selection
• Wider Network Impacts (WNI) / Blue Bell Hill
• Nitrogen deposition
• Human health
• Safety / smart motorway
• Budget / Cost
• Green belt
The following table provides the Applicant's responses to those issues.
<table>
<tr><th>WR summary</th><th>Response</th></tr>
<tr><td>Need for the Project: concern expressed that the project will not meet its objectives.
Claims the proposals within the scheme will not address problems at the immediate location of Dartford. Location A may have been more effective.</td><td>The Scheme Objectives are recorded in the Need for the Project [APP-494]. They were agreed between the Applicant and the Department for Transport (DfT), and include the requirement to relieve the congested Dartford Crossing and its approach roads.
Table 4.2 of the Planning Statement [APP-495] provides a summary of how the key benefits of the Project support the Scheme Objectives. The benefits of the Project are such that it is the right solution to the issues identified and the Project would support the Scheme Objectives.
In Annex A of Post-event submissions, including written submission of oral comments, for ISH1 [REP1-183], Section A.2 explains how the reduction of traffic at the Dartford Crossing is linked to the benefits of the Project:
'To understand the performance of the Dartford Crossing, in scenarios with and without the proposed A122 Lower Thames Crossing (ie the Do Minimum and Do Something</td></tr>
</table></td></tr>
</table>

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			scenarios) it is the journey time benefits and the journey time reliability benefits that provide the means to understand the benefits of the project, and to assess whether the proposed new road would continue to provide relief to the Dartford Crossing into the future.' The Project has undergone a thorough assessment of route alternatives, which is presented in Chapter 5 of the Planning Statement.[**APP-495**]. Section 5.4 sets out the key stages that led to the selection of the Preferred Route Announcement (PRA) by DfT, and subsequent reappraisal by the Project. With regard to Location A (Additional Capacity at the Existing Dartford Crossing), the Applicant examined options for an additional tunnel or an additional bridge at this location. Table 5.10 sets out how these options were developed together as Route 1. The Applicant has regularly revisited the options selection process prior to the submission of the Application. The reassessment confirmed that: a. Route 1 could not be developed as a free-flowing 70mph solution, as the crossings and approaches would be restricted to 50mph. b. As traffic would still be funnelled through the existing M25/A282 corridor between junction 2 and junction 30, it would not provide resilience on the network. c. Despite lower costs than the preferred route, it delivered lower value for money as the economic benefits were substantially smaller. d. The additional traffic through the existing corridor would exacerbate existing air quality problems and lead to an overall noise disbenefit.
		Concerns about the wider network impacts of the scheme including incidents at Dartford or between the M20 and A2 on the proposed LTC; Applicant not including upgrade works for Blue Bell Hill in the Project which is being taken forward by Kent CC. Concerns about the effects on the strategic network if the Blue Bell Hill upgrade and the LTC junction on the A2 are constructed	Kent County Council is currently progressing improvements on the A229 Blue Bell Hill to improve journey time reliability, reduce delays and enhance road safety on the route. While the Order Limits do not extend to include any works on Blue Bell Hill, the outline Traffic Management plan for Construction [**REP1-174**] secures the provision of a Traffic Management Forum which ensures the co-ordination of works on the road network during the construction of the Project. The Applicant will therefore work with the relevant Local Highway Authorities including Kent CC to manage the impact of works to ensure that the network continues to operate effectively.

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		simultaneously. Concerns about how HGVs manage the gradient on Blue Bell Hill.	
		Concerns about the effects of nitrogen deposition and how this will be mitigated.	The DCO Application provides 245ha of compensatory habitat, with details of the sites and how they were selected provided in the Environmental Statement (ES) Appendix 5.6: Project Air Quality Action Plan (PAQAP) [**APP-350**]. Nitrogen deposition compensation sites were selected using a site selection methodology developed in partnership with stakeholders including Natural England as explained in the PAQAP [**APP-350**]. Further information on the extent of the nitrogen deposition compensation is provided in Annex F of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**],
		Concerns about detrimental health outcomes to Gravesham residents in relation to noise, visual aspect, air quality and environment.	The Applicant notes the concerns regarding the health outcomes to Gravesham residents. Environmental Statement Chapter 13: Population and Human Health [**APP-151**].describes how local communities could be affected by the construction and operation of the Project and explains the ways in which these impacts would be reduced. As well as the assessments documented in ES Chapter 13, the Applicant has carried out a Health and Equalities Impact Assessment (HEqIA) [**APP-539**], which considers the Project's impacts during construction and operation on the health and wellbeing of local communities covering a number of topics including severance, accessibility, work and training, access to open spaces and mental health and wellbeing. The HEqIA also considers the impacts on those protected by equalities legislation, such as children, older people, disabled people, and those with pre-existing health conditions, accounting for the impacts during construction and operation phases. The ES also includes assessments of the Project's impacts on specific aspects of the environment, including ES Chapter 12: Noise and Vibration [**APP-150**], ES Chapter 7 Landscape and Visual [**APP-145**] and ES Chapter 5: Air Quality [**APP-143**]. The range of controls and mitigation measures that would be used to limit or avoid impacts on local communities, including local roads, are secured through their inclusion in the REAC, which forms part of ES Appendix 2.2: Code of Construction Practice [**REP1-157**].
		Smart motorway features do not account for human behaviour and would not be as safe as a hard shoulder.	Safety is National Highways' highest priority. The design of the A122 seeks to further enhance safety, beyond that of a conventional All Purpose Trunk Roads (APTRs), through addition of technology services and features to better support the road user. APTRs have been in existence for many years and are used regularly by the public. Like other ATPRs,

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			the A122 will typically have 1m nearside and offside hard strips and no hard shoulder. Therefore, the appropriate design and operation for the A122 is that of an APTR with enhanced safety and operational features. The key design philosophy is that A122 is an APTR, not a motorway or ALR motorway. The operation of APTRs without hard shoulders is not a recent development. There are many hundreds of miles of APTR, without hard shoulder, currently in operation across the country which are used by millions of road users each year. Whilst there are many facets involved in determining the design and operating regime for a road, key factors for the A122 are as follows: a. User safety. b. The A122 is new build and not a conversion of an existing road. c. Purpose of route and route consistency, taking into account the interfaces that the A122 has with APTRs (A2, A13, A1089), M25 and the local road network. d. Operation of the road tunnel. Further information is provided in 9.17 Issue Specific Hearing 1 Action number 3 Design and operational distinction between an all purpose trunk road (APTR) and smart motorway [**REP1-196**]
		Concerns that the Project does not provide value for money.	Achieving value for money is one of the Scheme Objectives and a Value for Money (VfM) assessment has been carried out. As detailed in the Need for the Project [**APP-494**] it represents positive value for money as the substantial benefits of the Project outweigh the costs. The Economic Appraisal Report (EAR) within Appendix D: Economic Appraisal Package of the Combined Modelling and Appraisal Report (ComMA) [**APP-526**] describes the methodologies used to appraise the economic, environmental, social benefits, disbenefits, revenues and costs of the Project and presents the appraisal results. The appraisal informs the Project's VfM assessment. The appraisal, which uses outputs from the Lower Thames Area Model (LTAM) transport model, aligns with the principles in HM Treasury Green Book (HM Treasury, 2022) and is based on the methodologies in the DfT's Transport Analysis Guidance (TAG).
		Reflecting concerns from local authorities on the impact of the scheme on housing provision, expenditure,	Planning Statement Appendix C: Local Authority Policy Review [**APP-498**] provides an assessment of the Project against adopted and emerging local plan policies, including allocations. Chapter 7 of the Planning Statement [**APP-495**] sets out the identification and assessment of the Project's alignment and conformity with other matters that are potentially important and relevant, including national policy, local plan policies and

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		businesses and local communities.	allocations, and consideration of emerging local plan policy where appropriate. Chapter 7 identifies where the policies explicitly support the development of the Project. ES Chapter 13: Population and Human Health [**APP-151**] provides an assessment of the Project impacts on residential development land: sites or proposals identified in national or local plans, policies or strategies for development, or land subject to planning permission. ES Chapter 13 also describes how local communities could be affected by the construction and operation of the Project and explains the ways in which these impacts would be reduced. As well as the assessments documented in ES Chapter 13, the Applicant has carried out a Health and Equalities Impact Assessment (HEqIA) [**APP-539**], which considers the Project's impacts during construction and operation on the health and wellbeing of local communities covering a number of topics including severance, accessibility, work and training, access to open spaces and mental health and wellbeing. The HEqIA also considers the impacts on those protected by equalities legislation, such as children, older people, disabled people, and those with pre-existing health conditions, accounting for the impacts during construction and operation phases.
		Concerns about the impacts of the new crossing on the Green Belt.	The Applicant has provided a detailed assessment of the Project and its impact on the Green Belt in Planning Statement Appendix E [**APP-500**]. This demonstrates that the Project is compliant with national policy which is permissive of 'inappropriate development' in the Green Belt in 'very special circumstances'.

REP1-330 David Bowling

<table>
<tr><th>Rep ID</th><th>WR Submitter</th><th>WR/Overview/Applicant's Response</th></tr>
<tr><td rowspan="2">REP1-330</td><td rowspan="2">David Bowling</td><td>WR:
WR link: REP1-330</td></tr>
<tr><td>Overview:
REP1-330 raised issues on the following topics:
• The role of Thurrock Council as the discharging authority for part of the Project
• Water requirements for TBMs and potential impacts on drinking water supplies
• The Interested Party's participation in the DCO Examination
The following table provides the Applicant's responses to those issues.
<table>
<tr><th>WR summary</th><th>Response</th></tr>
<tr><td>The role of Thurrock Council as the discharging authority for part of the Project</td><td>The Applicant's draft DCO [REP1-042] as drafted in Schedule 2 part 2 (18) assumes that the Secretary of State (SoS) is the discharging Authority. The draft DCO requires the Applicant to consult with the Relevant Local Authorities on the requirement submissions prior to the formal application to discharge a requirement to the SoS.</td></tr>
<tr><td>Water requirements for tunnel boring machines (TBMs) and potential impacts on drinking water supplies</td><td>Water required for the operation of TBMs would be supplied from the Linford borehole. The water would be piped from the Northern Tunnel Entrance Compound to service both tunnel drives. No water would be sourced from south of the river to supply the TBMs.
There would be no adverse impacts on local communities, noise or the water environment as a result of pumping water along pipes to the tunnels. Water used during the tunnel boring process would not be wasted, rather it would be appropriately cleaned and returned into the local water system. Further information on tunnel construction works is provided in Environmental Statement Chapter 2: Project Description [APP-140]</td></tr>
<tr><td>The Interested Party's participation in the DCO Examination</td><td>The Examining Authority is responsible for the delivery of the Examination process.</td></tr>
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REP1-341 Emma Tristram

<table>
<tr><th>Rep ID</th><th>WR Submitter</th><th>WR/Overview/Applicant's Response</th></tr>
<tr><td rowspan="2">REP1-341</td><td rowspan="2">Emma Tristram</td><td>WR:
WR link: REP1-341</td></tr>
<tr><td>Overview:
REP1-341 raised issues on the following topics:
Carbon emissions
Air quality, including PM2.5 targets
Biodiversity Net Gain
The Scheme Objectives
Cross-river active travel
Public transport on the Project
Smart motorways
The cost and BCR of the Project
Orsett impacts
The following table provides the Applicant's responses to those issues.<table><tr><th>WR summary</th><th>Response</th></tr><tr><td>Carbon emissions</td><td>The Project is setting out an industry leading position in terms of driving out carbon in the preliminary design and setting a framework to continue to reduce its carbon impact through the commitments made in the Carbon and Energy Management Plan, which is one of three documents addressing carbon reduction in the DCO Application:
Planning Statement Appendix I: Carbon Strategy and Policy Alignment [APP-504] states that 'the Project represents a step change in approach for a road scheme of this scale, in terms of the scope and nature of the measures which the Applicant is committing to deliver to reduce emissions during the construction and operation of the new road. Together with the policies which the Government has set out in its Decarbonising Transport Plan (2021), these measures ensure that the Project is aligned</td></tr></table></td></tr>
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			with a trajectory to net zero and that the Project's emissions would not therefore be significant, in accordance with relevant guidance.' • Carbon and Energy Management Plan [**APP-552**]. • ES Chapter 15: Climate [**APP-153**] Additionally, a review and the Project's response to legislation, policies and plans relevant to climate is presented in ES Appendix 15.1: Climate Legislation and Policy [**APP-480**]. A second iteration of the Carbon and Energy Management Plan [**APP-552**] would be used to demonstrate the implementation of the carbon commitments secured through the DCO during the construction phase and would set out the ways in which appointed Contractors would demonstrate that carbon emissions are kept within the defined limits. The Project has a commitment to implement the PAS2080 'Carbon Management in Infrastructure' standard, and each Contractor's plan would be refreshed annually to demonstrate it remains consistent with emerging best practice and aligned with their emissions pathway.
		Air quality, including PM2.5 targets	The Applicant has assessed the air quality impacts of both the operation and construction of the Project in ES Chapter 5 [**APP-143**], and proposed measures to manage these impacts where appropriate are outlined in the CoCP and REAC [**REP1-157**]. The air quality assessment reported in ES Chapter 5: Air Quality [**APP-143**] demonstrates that the Project would comply with the current legal thresholds for PM2.5. Air quality modelling confirmed that there would be no exceedances of the annual mean PM2.5 AQS objective of 25µg/m^3 and the annual mean PM2.5 Limit Value of 20µg/m^3 across the study area in both the Do-Minimum and Do-Something scenarios of the construction and operational phases.
		Biodiversity Net Gain	The Project's biodiversity metric forecasts, reported in ES Appendix 8.21: Biodiversity Metric Calculations [**APP-417**], are based on the preliminary design and a number of limitations and assumptions (as detailed in Section 5 of that appendix) that have had to be made to allow a quantitative forecast of biodiversity unit change. It is considered that this assessment provides a realistic worst-case scenario of the likely performance of the Project in terms of net biodiversity, given the necessarily precautionary nature of the assumptions made. As stated within this technical appendix, the Project recognises that it would result in the loss of irreplaceable habitats such as ancient woodland, and that this would prevent any overall claim of Biodiversity Net Gain for the Project (paragraph 1.1.10).
		The Project's fulfilment of the Scheme Objectives	The Scheme Objectives are recorded in the Need for the Project [**APP-494**]. They were agreed between the Applicant and the Department for Transport, and include the requirement to relieve the congested Dartford Crossing and its approach roads.

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			Table 4.2 of the Planning Statement [**APP-495**] provides a summary of how the key benefits of the Project support the Scheme Objectives. The benefits of the Project are such that it is the right solution to the issues identified and the Project would support the Scheme Objectives.
		Cross-river active travel	The Applicant has considered a range of options during the development of the Project to provide improved cross-river provision for walkers and cyclists. The options investigated include using the tunnel, upgrading the existing ferry, relocating the ferry, building a separate bridge or cable car, and providing a shuttle service through the tunnel. These options were not taken forward for a variety of reasons including technical feasibility, operational issues, lack of commercial viability, cost, environmental impacts, and poor safety. Latent demand for walking and cycling across the River Thames at the Project crossing point is low and therefore unlikely to unlock enough trips to make the required infrastructure for a dedicated shuttle service economically viable. Page 48 of the Project Design Report Part G: Design Evolution [**APP-514**] provides further information. In addition, Section 5.3 in Chapter 5 of the Planning Statement [**APP-495**] provides an overview of the assessment undertaken on alternative modes of transport. Further information is provided in Annex E.9 of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].
		Public transport on the Project	The Project would create opportunities for public transport operators to develop new local and regional bus services, by providing new connectivity between Kent, Thurrock and Essex. Identification and development of these routes is the responsibility of the relevant operators. Local buses will not have to pay the user charge for the Lower Thames Crossing, reducing operating costs for operators as is set out in Section 2.2 of the Road User Charging Statement [**APP-517**]. Further information is provided in Annex E.9 of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].
		The use of Smart Motorway features	Safety is National Highways' highest priority. The design of the A122 seeks to further enhance safety, beyond that of a conventional All Purpose Trunk Roads (APTRs), through addition of technology services and features to better support the road user. APTRs have been in existence for many years and are used regularly by the public. Like other ATPRs, the A122 will typically have 1m nearside and offside hard strips and no hard shoulder. Therefore, the appropriate design and operation for the A122 is that of an APTR with enhanced safety and operational features.

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			The key design philosophy is that A122 is an APTR, not a motorway or ALR motorway. The operation of APTRs without hard shoulders is not a recent development. There are many hundreds of miles of APTR, without hard shoulder, currently in operation across the country which are used by millions of road users each year. Whilst there are many facets involved in determining the design and operating regime for a road, key factors for the A122 are as follows: a. User safety. b. The A122 is new build and not a conversion of an existing road. c. Purpose of route and route consistency, taking into account the interfaces that the A122 has with APTRs (A2, A13, A1089), M25 and the local road network. d. Operation of the road tunnel. Further information is provided in 9.17 Issue Specific Hearing 1 Action number 3 Design and operational distinction between an all purpose trunk road (APTR) and smart motorway [**REP1-196**].
		The cost and BCR of the Project, and the effect of the two-year rephasing in capital funding	Achieving value for money is one of the Scheme Objectives and a Value for Money (VfM) assessment has been carried out. As detailed in the Need for the Project [**APP-494**] it represents positive value for money as the substantial benefits of the Project outweigh the costs. The Economic Appraisal Report (EAR) within Appendix D: Economic Appraisal Package of the Combined Modelling and Appraisal Report (ComMA) [**APP-526**] describes the methodologies used to appraise the economic, environmental, social benefits, disbenefits, revenues and costs of the Project and presents the appraisal results. The appraisal informs the Project's VfM assessment. The appraisal, which uses outputs from the Lower Thames Area Model (LTAM) transport model, aligns with the principles in HM Treasury Green Book (HM Treasury, 2022) and is based on the methodologies in the DfT's Transport Analysis Guidance (TAG). The Applicant's position is that the Benefit Cost Ratio (BCR) of the Project is robust, measurable and has been undertaken in line with the DfT's Transport Analysis Guidance (TAG), as set out in the Combined Modelling and Appraisal Report [**APP-526**]. The assured costs, as presented in the application, take into account labour, material and inflation. These adequately represent the Applicant's current position in relation to these cost items. The net scheme costs were assured by the Applicant in February 2022 as stated in Table 4.4 of the Combined Modelling and Appraisal Report, Appendix D [**APP-526**].

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			Further information is provided in Section 4.8 and Annex H of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**] The Applicant considers that, in line with other DCO applications, the draft DCO permits a period of five years to begin development. Accordingly, the application accommodates a proportionate degree for flexibility around the timing of construction, which allows for the two-year rephasing announcement. The level of flexibility sought here by the Project is no different to the level of flexibility contained in many other, if not all, DCO applications.
		Impacts on Orsett;	The Applicant notes the concerns regarding the impacts of the proposed A27 Arundel bypass on the village of Binsted. However, the Applicant has made an assessment of the impacts of the proposed A122 (the Project) on the neighbouring villages, which are reported in ES Chapter 13: Population and Human Health [**APP-151**]. This chapter describes how local communities could be affected by the construction and operation of the Project and explains the ways in which these impacts would be reduced. As well as the assessments documented in ES Chapter 13, the Applicant has carried out a Health and Equalities Impact Assessment (HEqIA) [**APP-539**], which considers the Project's impacts during construction and operation on the health and wellbeing of local communities covering a number of topics including severance, accessibility, work and training, access to open spaces and mental health and wellbeing. The HEqIA also considers the impacts on those protected by equalities legislation, such as children, older people, disabled people, and those with pre-existing health conditions, accounting for the impacts during construction and operation phases. The ES also includes assessments of the Project's impacts on specific aspects of the environment, including ES Chapter 5: Air Quality [**APP-143**] and ES Chapter 12: Noise and Vibration [**APP-150**].

REP1-343 Fraser Massey

Rep ID	WR Submitter	WR/Overview/Applicant's Response
REP1-343	Fraser Massey	**WR**: WR link: **REP1-343**
		Overview: **REP1-343** raised issues on the following topics: • Cost/value for money • Greenbelt • Agricultural land • Climate compatibility • Air Quality • Ancient and other woodlands, wildlife and habitats • Cultural Heritage • Impact on homes, businesses, leisure, schools and communities • Safety/Smart Motorway attributes • The Project will not solve capacity challenge at Dartford Crossing • Connections not adequate • Impact on existing road network • No sustainable travel option provisions • Health and well-being • Impact of Construction on Thurrock, including the impacts of an imported workforce on the local community The following table provides the Applicant's responses to those issues.

Rep ID	WR Submitter	WR/Overview/Applicant's Response

WR summary	Response
Comments expressing concern at the Project's cost and whether it provides value for money	Achieving value for money is one of the Scheme Objectives and a Value for Money (VfM) assessment has been carried out. As detailed in the Need for the Project [**APP-494**] it represents positive value for money as the substantial benefits of the Project outweigh the costs. The Economic Appraisal Report (EAR) within Appendix D: Economic Appraisal Package of the Combined Modelling and Appraisal Report (ComMA) [**APP-526**] describes the methodologies used to appraise the economic, environmental, social benefits, disbenefits, revenues and costs of the Project and presents the appraisal results. The appraisal informs the Project's VfM assessment. The appraisal, which uses outputs from the Lower Thames Area Model (LTAM) transport model, aligns with the principles in HM Treasury Green Book (HM Treasury, 2022) and is based on the methodologies in the DfT's Transport Analysis Guidance (TAG).
Comments expressing concern about the loss of Green Belt land	The Applicant has provided a detailed assessment of the Project and its impact on the Green Belt in Planning Statement Appendix E [**APP-500**]. This demonstrates that the Project is compliant with national policy which is permissive of 'inappropriate development' in the Green Belt in 'very special circumstances'.
Concerns that the Project would "decimate" agricultural land in Thurrock	The Applicant notes the concerns regarding the Project's impacts on agricultural land in Thurrock. Environmental Statement Chapter 10: Geology and Soils [**APP-148**] presents an assessment of likely significant effects on soil resources and BMV land. ES Appendix 10.4: Agricultural Land Classification Factual Report [**APP-425**] presents the outputs of the survey and has informed the baseline of ES Chapter 10. The Applicant has taken reasonable and practicable steps to minimise and mitigate for the likely significant effects. The design has been optimised to minimise the land take required to construct and operate the Project. The route optioneering phase and design development considered the presence of higher-quality agricultural land alongside other environmental and design constraints. Where agricultural land cannot be avoided, soil management measures to minimise the adverse effects of soil disturbance and handling during the construction phase are described in ES Chapter 10: Geology and Soils [**APP-148**] and secured through their inclusion in the REAC, which forms part of the Code of Construction Practice [**REP1-157**].

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		Concerns about the Project's impact on the climate, and whether the proposals reflect government policy and international agreements	The Project is setting out an industry leading position in terms of driving out carbon in the preliminary design and setting a framework to continue to reduce its carbon impact through the commitments made in the Carbon and Energy Management Plan, which is one of three documents addressing carbon reduction in the DCO Application: • Planning Statement Appendix I: Carbon Strategy and Policy Alignment [**APP-504**] states that '*the Project represents a step change in approach for a road scheme of this scale, in terms of the scope and nature of the measures which the Applicant is committing to deliver to reduce emissions during the construction and operation of the new road. Together with the policies which the Government has set out in its Decarbonising Transport Plan (2021), these measures ensure that the Project is aligned with a trajectory to net zero and that the Project's emissions would not therefore be significant, in accordance with relevant guidance"* • Carbon and Energy Management Plan [**APP-552**]. • ES Chapter 15: Climate [**APP-153**] Additionally, a review and the Project's response to legislation, policies and plans relevant to climate is presented in ES Appendix 15.1: Climate Legislation and Policy [**APP-480**]. A second iteration of the Carbon and Energy Management Plan [**APP-552**] would be used to demonstrate the implementation of the carbon commitments secured through the DCO during the construction phase and would set out the ways in which appointed Contractors would demonstrate that carbon emissions are kept within the defined limits. The Project has a commitment to implement the PAS2080 'Carbon Management in Infrastructure' standard, and each Contractor's plan would be refreshed annually to demonstrate it remains consistent with emerging best practice and aligned with their emissions pathway.
		Concerns regarding the Project's impacts on air quality in Thurrock	Air quality across the UK is improving generally. This is also evident in Thurrock. Thurrock's most recent annual status report (Annual Status Report on Air Quality in Thurrock (Thurrock Council, 2022)) covering air quality in Thurrock in recent years, states that there is a general trend of reduction in nitrogen dioxide (NO2) concentrations, which was evident even before the COVID-19 pandemic. The Project air quality assessment is presented within ES Chapter 5: Air Quality [**APP-143**] and has considered the impact of the Project on air quality. The Project is expected to lead to a reduction in traffic flows and congestion on the M25 between junction 2 and 29, and the A2 between M25 junction 2 and the M2/A2/A122 Lower Thames Crossing junction, which would lead to an improvement in air quality. An increase in pollutant levels is predicted at receptors adjacent to the A122 Lower Thames Crossing route, but pollutants

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			are predicted to be well below air quality objectives at receptors along this route, with the Project in operation.
		Ancient and other woodlands, wildlife and habitats	The effects of the Project on Terrestrial Biodiversity have been assessed within Environmental Statement (ES) Chapter 8: Terrestrial Biodiversity [**APP-146**] including assessments of designated areas, such as Sites of Special Scientific Interest (SSSIs), and ancient woodlands and veteran trees. It is explained in Section 8.3 of ES Chapter 8 that the assessment has regard to both direct and indirect impacts, including severance or fragmentation of habitats or wildlife corridors. ES Chapter 8 describes the magnitude of the impacts, and the measures proposed to avoid, reduce, and compensate for the effects on sensitive ecological receptors, including ancient woodland and veteran trees.
		Impact on homes, businesses, leisure, heritage, schools and communities	The Applicant has carried out a Health and Equalities Impact Assessment [**APP-539**] which identifies residents living in communities potentially affected by virtue of their proximity to the proposed A122 Lower Thames Crossing (the Project) or affected by environmental change (for example, changes in traffic levels, air quality or noise levels) in addition to groups who may be particularly vulnerable to environmental and social change. Further to this, the Applicant has set out the impacts and proposed mitigation for each community within the vicinity of the Project in the Community Impact Report [**APP-549**]. The Applicant has also carried out an assessment on population and human health in the Environmental Statement Chapter 13: Population and Human Health [**APP-151**]. The assessment covers the likely significant effects of the Project on population and human health during construction and operation. The assessment considers potential effects on private property and housing, community land and assets, development land and businesses, agricultural land holdings, and walkers, cyclists and horse riders (WCH). Impacts of the Project on built heritage are assessed in the ES. ES Chapter 6: Cultural Heritage [**AS-044**] provides an assessment of the effects on the built heritage, including Listed Buildings. The Design Principles, Environmental Masterplan, CoCP and REAC all form part of the Project control plan. The control plan is the framework for mitigating, monitoring and controlling the effects of the Project. It is made up of a series of 'control documents' which present the mitigation measures identified in the application that must be implemented during design, construction and operation to reduce the adverse effects of the Project. These documents can found here The Design Principles [**APP-516**], Environmental Masterplan [**APP-159** to **APP-168**], Environmental Statement Appendix 2.2: Code of

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			Construction Practice [**REP1-157**, **APP-337**, **APP-338**, **and** **REP1-158**] and Stakeholder Actions and Commitments Register [**REP1-176**].
		Safety/ smart motorway attributes	Safety is National Highways' highest priority. The design of the A122 seeks to further enhance safety, beyond that of a conventional All Purpose Trunk Roads (APTRs), through addition of technology services and features to better support the road user. APTRs have been in existence for many years and are used regularly by the public. Like other ATPRs, the A122 will typically have 1m nearside and offside hard strips and no hard shoulder. Therefore, the appropriate design and operation for the A122 is that of an APTR with enhanced safety and operational features. The key design philosophy is that A122 is an APTR, not a motorway or ALR motorway. The operation of APTRs without hard shoulders is not a recent development. There are many hundreds of miles of APTR, without hard shoulder, currently in operation across the country which are used by millions of road users each year. Whilst there are many facets involved in determining the design and operating regime for a road, key factors for the A122 are as follows: a. User safety. b. The A122 is new build and not a conversion of an existing road. c. Purpose of route and route consistency, taking into account the interfaces that the A122 has with APTRs (A2, A13, A1089), M25 and the local road network. d. Operation of the road tunnel Further information is provided in 9.17 Issue Specific Hearing 1 Action number 3 Design and operational distinction between an all purpose trunk road (APTR) and smart motorway [**REP1-196**].
		Will not solve capacity at Dartford Crossing	The Scheme Objectives are recorded in the Need for the Project [**APP-494**]. They were agreed between the Applicant and the Department for Transport, and include the requirement to relieve the congested Dartford Crossing and its approach roads. Table 4.2 of the Planning Statement [**APP-495**] provides a summary of how the key benefits of the Project support the Scheme Objectives. The benefits of the Project are such that it is the right solution to the issues identified and the Project would support the Scheme Objectives. In Annex A of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**], Section A.2 explains how the reduction of traffic at the Dartford Crossing is linked to the benefits of the Project:

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			'*To understand the performance of the Dartford Crossing, in scenarios with and without the proposed A122 Lower Thames Crossing (ie the Do Minimum and Do Something scenarios) it is the journey time benefits and the journey time reliability benefits that provide the means to understand the benefits of the project, and to assess whether the proposed new road would continue to provide relief to the Dartford Crossing into the future.*'
		Connections between the Project and the surrounding road network are not adequate	The main considerations for connectivity with the surrounding road network were likely journey origins and destinations, physical and environmental constraints, compatibility of junction location and type, and suitability for use on an All-Purpose Trunk Road. The desire to provide more local connections to and from the Project must be balanced against the need to ensure free-flowing connections with the SRN and safety for all road users. Other considerations are increased traffic on local roads arising from additional connections and increased environmental effects associated with large junctions. Where direct local connections are not provided, it is generally possible to connect to the Project by first joining roads on the SRN that are served by the proposed junctions. Further information on the Project's connectivity with the surrounding road network is provided in Section 4.5.3 of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].
		Impact on existing road network	The DCO Application includes a Wider Network Impacts Management and Monitoring Plan which sets out the Applicant's approach on the forecast wider network impacts of the Project [**APP-545**]. The creation of new capacity on the road network will lead to changes in the way people travel. Some people will choose to make different journeys because shorter or less congested routes become available, and some people who would not previously have travelled will choose to make new journeys because the faster or shorter journey becomes more affordable. As a result, there will be changes in the lengths of journeys made, and in the total number of journeys made. The net increase in kilometres driven is highest in the PM peak hour, with an overall increase of 1.1% in 2030 and 1.23% in 2045. The Applicant does not recognise the assertion that traffic would increase by 50%. Further information is provided in section A.3 New and longer trips in Annex A of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**],
		No sustainable travel options provisions	The Applicant has considered a range of options during the development of the Project to provide improved cross-river provision for walkers and cyclists. The options investigated include using the tunnel, upgrading the existing ferry, relocating the ferry, building a separate bridge or cable car, and providing a shuttle service through the tunnel. These

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			options were not taken forward for a variety of reasons including technical feasibility, operational issues, lack of commercial viability, cost, environmental impacts, and poor safety. Latent demand for walking and cycling across the River Thames at the Project crossing point is low and therefore unlikely to unlock enough trips to make the required infrastructure for a dedicated shuttle service economically viable. Page 48 of the Project Design Report Part G: Design Evolution [**APP-514**] provides further information. In addition, Section 5.3 in Chapter 5 of the Planning Statement [**APP-495**] provides an overview of the assessment undertaken on alternative modes of transport. Further information is provided in Annex E.9 of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].
		Health and well-being	A Health and Equalities Impact Assessment (HEqIA) [**APP-539**] has been prepared, which considers the health impacts on local people and communities, including those protected by equality legislation, such as children and older people, during the construction and operation of the Project.
		Impact of Construction on Thurrock, including the impacts of an imported workforce on the local community	The Applicant has produced an EIA to assess the environmental impacts of the construction and operation of the Project, including the impacts on local communities. The EIA is documented in the ES [**APP-139**] along with embedded mitigation within the Code of Construction Practice (CoCP) [**REP1-157**] and the Register of Environmental Actions and Commitments (REAC), which forms part of the CoCP. The Environmental Masterplan [**APP-159** to **APP-168**] is legally secured through Schedule 2 Requirement 5 of the draft DCO [**REP1-042**]. More information on how the Applicant would reduce impacts on local communities, properties and homes can be found in the CoCP, as well as the topic chapters of the ES, in particular ES Chapter 5: Air Quality [**APP-143**], ES Chapter 12: Noise and Vibration [**APP-150**] and ES Chapter 13: Population and Human Health [**APP-151**]. In the main, construction would be carried out during the normal working hours as set out in the Code of Construction Practice (CoCP) [**REP1-157**]. The proposed normal working hours would be from 07:00 to 19:00 on weekdays (excluding bank holidays) and from 07:00 to 16:00 on Saturdays. Normal hours for tunnelling and other underground works would be 24/7 because operating the tunnel boring machines, casting tunnel segments, and lining the tunnel continuously are necessary to minimise the risks associated with, among other things, ground movement and water ingress.

REP1-344 Gary Fitzgerald

<table>
<tr><th>Rep ID</th><th>WR Submitter</th><th>WR/Overview/Applicant's Response</th></tr>
<tr><td rowspan="2">REP1-344</td><td rowspan="2">Gary Fitzgerald</td><td>WR:
WR link: REP1-344</td></tr>
<tr><td>
Overview:
REP1-344 raised issues on the following topics:

The need for the Project / Project Viability Route Alternatives - more HGVs on Dartford overnight
Project Cost
Cumulative impacts / environment / climate
Ockendon Road impacts / WNI
North Ockendon Conservation Area
Thames Chase Forest
Consultation / use of statistics

The following table provides the Applicant's responses to those issues.
<table>
<tr><th>WR summary</th><th>Response</th></tr>
<tr><td>Modal alternatives should be considered such as rail and sea freight, more research should have been undertaken to encourage freight and haulage to cross the Dartford Crossing overnight between 8.00pm – 6.00am.</td><td>The Scheme Objectives are recorded in the Need for the Project [APP-494]. They were agreed between the Applicant and the Department for Transport, and include the requirement to relieve the congested Dartford Crossing and its approach roads.

Table 4.2 of the Planning Statement [APP-495] provides a summary of how the key benefits of the Project support the Scheme Objectives. The benefits of the Project are such that it is the right solution to the issues identified and the Project would support the Scheme Objectives.

In Annex A of Post-event submissions, including written submission of oral comments, for ISH1 [REP1-183], Section A.2 explains how the reduction of traffic at the Dartford Crossing is linked to the benefits of the Project:

'To understand the performance of the Dartford Crossing, in scenarios with and without the proposed A122 Lower Thames Crossing (ie the Do Minimum and Do Something scenarios) it is the journey time benefits and the journey time reliability benefits that</td></tr>
</table>
</td></tr>
</table>

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			provide the means to understand the benefits of the project, and to assess whether the proposed new road would continue to provide relief to the Dartford Crossing into the future.' The Applicant has considered reasonable alternatives to the Project, including modal alternatives which are detailed in ES Chapter 3: Assessment of Reasonable Alternatives [**APP-141**]. An assessment carried out by the DfT in 2009 found that the inclusion of rail infrastructure within the Project would not provide value for money. This assessment was reviewed in 2022 and is still considered applicable. For more information, see Section 5.3 of the Planning Statement [**APP-495**]. With regards to encouraging freight and haulage to cross the Dartford Crossing overnight between 20:00 and 06:00, the Applicant notes that the times that freight/haulage chooses to cross the Dartford Crossing is determined by a number of factors and it would not be appropriate for the Applicant to seek to interfere with the operations of private operators. The Applicant notes however that the Dart Charge is not levied between 22:00 and 06:00 which may provide an incentive for some operators to cross during these hours The forecast changes to traffic flows are presented in Appendix C: Transport Forecasting Package of the Combined Modelling and Appraisal Report [**APP-522**]. Traffic modelling submitted as part of the Application shows that, compared with the situation without the new road crossing, the overall level of traffic using the Dartford Crossing is forecast to fall by an average of 19% in 2030 during the peak hours and remain below current levels for the foreseeable future. Average speeds on that part of the network would rise and journey times would become more reliable. In addition, the Project is forecast to result in reductions in traffic on some parts of the SRN and some local roads. Annex B.2 of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**], addresses the Applicant's consideration of the role that other transport modes, including rail, might play in addressing congestion at the Dartford Crossing. It explains that a new road crossing of the River Thames is considered to be the only feasible and deliverable option to relieve the congested Dartford Crossing.
		Project Cost, money should be spent on other priorities such as the NHS, climate change or repairing roads	Achieving value for money is one of the Scheme Objectives and a Value for Money (VfM) assessment has been carried out. As detailed in the Need for the Project [**APP-494**] it represents positive value for money as the substantial benefits of the Project outweigh the costs. The Economic Appraisal Report (EAR) within Appendix D: Economic Appraisal Package of the Combined Modelling and Appraisal Report (ComMA) [**APP-526**] describes the methodologies used to appraise the economic, environmental, social benefits, disbenefits,

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			revenues and costs of the Project and presents the appraisal results. The appraisal informs the Project's VfM assessment. The appraisal, which uses outputs from the Lower Thames Area Model (LTAM) transport model, aligns with the principles in HM Treasury Green Book (HM Treasury, 2022) and is based on the methodologies in the Department for Transport's (DfT) Transport Analysis Guidance (TAG). Strategic development of national transport infrastructure is the responsibility of the DfT. The Government's Road Investment Strategy 2: 2020–2025, also known as RIS2, (Department for Transport, 2020a), identified delivery of the Lower Thames Crossing as one of three major commitments of RIS2 (page 74), the provision of which will allow: '… *the Thames Estuary to flourish as an area in its own right and overcome historic problems of deprivation*.' (see graphic on page 90 and Scheme E30 on page 100).
		Concerns about the impact on the local environment, agricultural land and the Green Belt including from traffic emissions, air, noise and light pollution. Concerns about climate change and the Project's compatibility with Government climate targets.	Minimising adverse impacts on the environment is one of the Scheme Objectives agreed between the Applicant and the Department for Transport, with the Scheme Objectives set out in Table 1.1 of the Need for the Project [**APP-494**]. The Project's proposals have been designed to provide an appropriate balance between the need to reduce environmental impacts during construction, including impacts on local people, while still allowing the Project to be built safely and efficiently. The Project has also been developed to minimise the amount of land needed for its construction while still fulfilling the Scheme Objectives. The proposals avoid unnecessary impacts on local communities, the water environment, noise and light-sensitive areas, assets of cultural value, and flora and fauna. Where adverse impacts are identified appropriate mitigation measures would be implemented to reduce the impacts on local communities and the environment. These mitigation measures have been decided upon after careful consideration of feedback from the public and key stakeholders. They are addressed in the topic-specific chapters of the ES and relevant appendices, in particular ES Appendix 2.2: Code of Construction Practice (CoCP) and the Register of Environmental Actions and Commitments (REAC), which forms part of the CoCP [**REP1-157**]. Mitigation measures proposed would be legally secured through requirements in Part 1 of Schedule 2 of the draft DCO [**REP1-042**]. The Applicant has provided a detailed assessment of the Project and its impact on the Green Belt in Planning Statement Appendix E [**APP-500**]. The DfT's Transport Decarbonisation Plan (DfT, 2021) sets out how the transport sector will support the UK's transition to net zero in line with the Net Zero Strategy and Climate

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			Change Act. It includes investment in active travel but also acknowledges the importance of continued investment in the UK's strategic road network, and the reduction of congestion which contributes to carbon emissions. The Applicant demonstrates the Project's compliance with relevant national policy, legislation and guidance in ES Appendix 15.1: Climate Legislation and Policy [**APP-480**] and Planning Statement Appendix I: Carbon Strategy and Policy Alignment [**APP-504**].
		Concerns about the impact on the road network, For example, the closure of Ockendon Road for two years, with proposed diversions and re-routing of bus routes.	During construction, the outline Traffic Management Plan for Construction (oTMPfC) [**REP1-174**] provides a series of controls that the Applicant would put into place to manage the impacts of construction traffic. It also includes a list of indicative temporary traffic management measures envisaged during construction including road closures. The impact of these have been assessed in Chapter 8 of the Transport Assessment [**APP-529**]. Impacts on the public transport network are assessed in Section 8.9. The Applicant understands concerns relates to the Ockendon Road closure. Whilst a closure of the road would be unavoidable, to enable a safe working provision for the construction of the construction works, the Applicant has committed to a closure up to a maximum of 10 months. This is reflected in the updated oTMPfC and is a new commitment in the Stakeholders Actions and Commitments Register [**REP1-176**]. To address the concern regarding the Ockendon Road diversion, further engagement and discussions with the local highway authority would be carried out in determining suitable diversion routes, which would be set out in the Traffic Management Plan.
		North Ockendon Conservation Area: concerns about the impacts of the slip roads of the LTC with the M25 on a Grade 1 Listed 16th Century Church (St. Mary Magdalene) in a Conservation Area and questions if Historic England or English Heritage been consulted.	Impacts of the Project on built heritage are assessed in the ES. ES Chapter 6: Cultural Heritage [**AS-044**] provides an assessment of the effects on the built heritage, including Listed Buildings. Historic England is a statutory consultee in respect of the application under section 42 of the Planning Act 2008 and the Infrastructure Planning (Examination Procedure) Rules 2010. Under s42(1)(a) of the Planning Act 2008, Historic England was notified of pre-application consultation and given opportunities to respond to each phase of statutory and non-statutory consultation.
		Concerns about the impacts on the Thames Chase Forest and other areas and that proposed compensatory woodland in Great Warley is	Thames Chase Forest Centre is located to the north of North Ockendon and to the south of Cranham and straddles the M25 in this location. Permanent acquisition of land through the middle of the site (101,426m^2) adjacent to the existing M25 would be required to

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		already a "primarily green area"	construct the new road and a diverted footpath which includes a new bridge. The Project proposes to provide replacement land Temporary possession of land and permanent acquisition of rights (30,214m^2) for diversion and modification of utility works (underground multiutilities and overhead power lines) would be needed on both sides of the M25. Temporary possession of land (8,905m^2) at the western side of the M25 would be needed during the construction period to allow working room for construction activities The Project proposes replacement land directly to the north (Plot 44-19) and to the south (Plots 42-19, 43-04) of the existing Thames Chase Forest Centre, totalling 156,093m^2. Where the Project link roads pass through Thames Chase Forest, a new WCH bridge has been designed to provide access to the east and west of the woodland. Thames Chase Trust / Forestry England is satisfied with the replacement land in principle. As such, the replacement land would be larger in quantity, equally or more accessible, useful and attractive, and its overall quality would be comparable. Therefore it would be no less advantageous to the persons, if any, entitled to rights of common or other rights, and to the public. Moreover, the benefits of the Project (including need) outweigh the loss of existing open space, taking into account the replacement land. Further details of these proposals can be found in the Land Plans (Volume B) [**REP1-009**]. Overall, there would be several hundred hectares of new woodland and habitats created across the Project during the construction phase, providing biodiversity benefits. The proposed A122 Lower Thames Crossing/M25 junction would affect the Thames Chase Forest Centre and the Applicant has engaged with Forestry England to inform plans to mitigate this impact. Proposals include the provision of replacement land to compensate for the loss within the Thames Chase Forest Centre. Compensatory planting is proposed at Hole Farm in Great Warley. This would build resilience into the wider network of designated sites and habitats and support a large number of species. The Applicant has been in discussion with Thames Chase Trust for six years about the impacts of the scheme which is being addressed through the Statement of Common Ground process [**REP1-117**].
		Claims that "previous telephone consultations have not been accurate" and that there has been "under	The pre-application consultation was carried out to the required standard as evidenced in the Consultation Report, as ratified by the Planning Inspectorate in accepting the Application.

Rep ID	WR Submitter	WR/Overview/Applicant's Response
		reporting of carbon emissions and environmental damage".

REP1-345 Gary Flowers

<table>
<tr><th>Rep ID</th><th>WR Submitter</th><th>WR/Overview/Applicant’s Response</th></tr>
<tr><td rowspan="2">REP1-345</td><td rowspan="2">Gary Flowers</td><td>WR:
WR link: REP1-345</td></tr>
<tr><td>Overview:
REP1-345 raised issues on the following topic:
• Compensation for diminution of the value of property as a result of the Project
The following table provides the Applicant’s responses to those issues.
<table>
<tr><th>WR summary</th><th>Response</th></tr>
<tr><td>Compensation</td><td>Those affected by the Project may be entitled to make a claim for compensation, in accordance with the Compensation Code. Each claim for compensation would be considered on its own merits, in line with the Code.
Further information about the compensation offered to those affected by the Project can be found in Compulsory Purchase and Compensation: guide 2 – Compensation to Business Owners and Occupiers and guide 4 – Compensation to Residential Owners and Occupiers (Department for Levelling Up, Housing and Communities).
Guide 4 includes information about compensation for when the value of someone’s home has been affected by the construction or operation of the Project.</td></tr>
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REP1-346 George Fereday

<table>
<tr><th>Rep ID</th><th>WR Submitter</th><th>WR/Overview/Applicant's Response</th></tr>
<tr><td rowspan="2">REP1-346</td><td rowspan="2">George Fereday</td><td>WR:
WR link: REP1-346</td></tr>
<tr><td>Overview:
REP1-346 raised issues on the following topics:
• Concerns about the Project's impact on the climate, and whether the proposals reflect government policy and international agreements
• Comments expressing concern about the Project's impacts on ancient woodland
• Concerns regarding the Project's impacts on biodiversity, and whether a biodiversity net gain could be achievable
• Comments expressing concern at the Project's cost and whether it provides value for money
• Concerns regarding the Project's impacts on air quality, including particulate levels
• Comments expressing concern that the Project's flood risk assessment has not accounted for the effects of climate change
• Comments expressing concern about the Applicant's public consultations, including concerns that the information provided was misleading or lacked detail, and that consultation feedback was misrepresented or not considered.
• Comments expressing concern with the safety and design of smart motorways and the use of such features on the Project.
• Comments expressing concern that the Project has not considered alternative modes of transport, including rail
• Comments expressing concern that the Project's development does not reflect the impact of the adoption of electric vehicles (EVs) in the UK
The following table provides the Applicant's responses to those issues.
<table>
<tr><th>WR summary</th><th>Response</th></tr>
<tr><td>Concerns about the Project's impact on the climate, and whether the proposals reflect</td><td>The Project is setting out an industry leading position in terms of driving out carbon in the preliminary design and setting a framework to continue to reduce its carbon impact through the commitments made in the Carbon and Energy Management Plan, which is one of three documents addressing carbon reduction in the DCO Application: ES Chapter</td></tr>
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Rep ID	WR Submitter	WR/Overview/Applicant's Response	
		government policy and international agreements	15: Climate [**APP-153**] Planning Statement Appendix I: Carbon Strategy and Policy Alignment [**APP-504**] Carbon and Energy Management Plan [**APP-552**]. Additionally, a review and the Project's response to legislation, policies and plans relevant to climate is presented in ES Appendix 15.1: Climate Legislation and Policy [**APP-480**]. ES Chapter 15 [**APP-153**] and Planning Statement Appendix I [**APP-504**] explain that carbon impacts associated with construction of the Project have been calculated as being no larger than 0.058% of the fourth carbon budget. It also explains that the Department for Transport's Decarbonising Transport: A Better, Greener Britain is expected to lead to significant reductions in road-user emissions over the lifetime of the Project. A second iteration of the Carbon and Energy Management Plan [**APP-552**] would be used to demonstrate the implementation of the carbon commitments secured through the DCO during the construction phase and would set out the ways in which appointed Contractors would demonstrate that carbon emissions are kept within the defined limits. The Project has a commitment to implement the PAS2080 'Carbon Management in Infrastructure' standard, and each Contractor's plan would be refreshed annually to demonstrate it remains consistent with emerging best practice and aligned with their emissions pathway. The Applicant is employing new technologies and practices to make the Project a 'pathfinder' for low-carbon construction, which means (paragraph 1.1.3 of the Carbon and Energy Management Plan): • Constructing the Project for the lowest practicable carbon emissions • Testing low-carbon innovation and approaches Leaving a legacy that enables future projects to decarbonise, in line with the Applicant's ambition for net zero construction emissions by 2040.
		Comments expressing concern about the Project's impacts on ancient woodland	The effects of the Project on Terrestrial Biodiversity have been assessed within Environmental Statement (ES) Chapter 8: Terrestrial Biodiversity [**APP-146**] including assessments of designated areas, such as Sites of Special Scientific Interest (SSSIs), and ancient woodlands and veteran trees. It is explained in Section 8.3 of ES Chapter 8 that the assessment has regard to both direct and indirect impacts, including severance or fragmentation of habitats or wildlife corridors. ES Chapter 8 describes the magnitude of the impacts, and the measures proposed to avoid, reduce, and compensate for the effects on sensitive ecological receptors, including ancient woodland and veteran trees. The Applicant recognises the irreplaceable nature of ancient woodland and veteran trees. Impacts upon ancient woodland and veteran trees have (amongst other environmental

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			impacts) been considered throughout the route options selection process, and the Project's impacts on these areas have been reduced through its design, while still achieving the Scheme Objectives, as set out in the Need for the Project [**APP-494**]. This design is reported within the Planning Statement [**APP-495**], specifically Chapter 5: Project evolution and alternatives, and Chapter 8: Planning balance and conclusions. The Project would result in the direct the loss of 5.35ha of ancient woodland south of the River Thames, and 1.57ha north of the River Thames; a total of 6.92ha. Where these impacts on ancient woodland cannot be avoided, compensatory woodland planting is proposed to offset the impacts. While ancient woodland cannot be replaced, new woodland planting would be designed to strengthen connectivity between existing retained woodland areas, particularly around Shorne and Ashenbank Woods SSSI, Claylane Wood, Great Crabbles Wood SSSI and Jeskyns Community Woodland to the south of the A2/M2. North of the River Thames, ancient woodland compensation planting is primarily proposed around Folkes Lane and Hole Farm with some immediately adjacent to Rainbow Wood Shaw. This would build resilience into the wider network of designated sites and habitats and support a large number of species. ES Figure 8.33 [**APP-294**] shows the locations of ancient woodland impacts and compensation planting areas.
		Concerns regarding the Project's impacts on biodiversity, and whether a biodiversity net gain could be achievable	ES Chapter 8: Terrestrial Biodiversity [**APP-146**] and ES Chapter 10: Geology and Soils [**APP-148**] describe the biodiversity and geological mitigation and enhancements proposed for the Project. These measures seek to maximise the opportunity for the Project to benefit biodiversity or geological habitats by improving existing habitat. The following measures are proposed in order to build in beneficial biodiversity to the scheme: North of the River Thames the new habitats (in the form of 'stepping stone sites') have been designed to connect existing biodiverse areas. 97ha of new habitat creation adjacent to Coalhouse Fort (see ES Figure 2.4: Environmental Masterplan [**APP-159** to **APP-168**]) include a number of different habitats created to enhance the environment adjacent to the River Thames, while also increasing the area's biodiversity value. It would comprise wetland habitat (refer to Design Principles [**APP-516**], Clause no. S9.13), together with some areas of ponds, wet grassland and scrapes. Around the north portal area 46ha of habitat designed for terrestrial invertebrates and reptiles, amongst other species will comprise open mosaic habitat, with wildflower and scrub planting using species mixes specifically designed to support the range of terrestrial invertebrate species currently recorded here including shrill carder bee, numerous south-facing bunds constructed from nutrient poor substrate and bare ground patches (see the

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			Design Principles [APP-516], Clause no. LSP.11, LSP.22) (see ES Figure 2.4: Environmental Masterplan [APP-159 to APP-168]). Planning Statement Appendix H: Green Infrastructure Study [APP-503] provides the 'bigger picture' for the delivery of large-scale green infrastructure as part of the Project connecting and enhancing communities and wildlife at the sub-regional and city-scale. The Project proposes seven multi-functional green bridges, restoration of the historical fen landscape and the creation of a Mardyke Valley Country Park. In addition, the Green Infrastructure Study considers that habitat creation required for mitigation, should be designed in a way that would also provide benefit to ecological features by providing new areas of planting that would improve connections between existing habitats. ES Figure 2.4: Environmental Masterplan [APP-159 to APP-168] identifies the embedded environmental mitigation measures for the Project including proposals affecting the functionality and connectivity of the Green Infrastructure network. National Highways has committed to achieving no net loss in biodiversity by the end of Road Investment Strategy (RIS) 2 period (2020-2025) and will work towards net biodiversity gain by 2040. Funding for the Project falls within RIS 2 and RIS 3 (2025-2030). ES Appendix 8.21: Biodiversity Metric Calculations [APP-417] presents the results of a biodiversity metric assessment to support the Environmental Impact Assessment (EIA) of the Project. While, overall this demonstrates there would be a net loss of biodiversity as calculated by the metric (paragraph 7.2.1 of ES Appendix 8.21) [APP-417] this needs to be balanced against the new areas of habitat and landscaped creation proposed as part of the Project (which are not counted in the metric) and against the benefits of the Project as a whole (outlined in the Need for the Project [APP-494] and Benefits and Outcomes [APP-553] documents).
		Comments expressing concern at the Project's cost and whether it provides value for money	Achieving value for money is one of the Scheme Objectives and a Value for Money (VfM) assessment has been carried out. As detailed in the Need for the Project [APP-494] it represents positive value for money as the substantial benefits of the Project outweigh the costs. The Combined Modelling and Appraisal Report Appendix D: Economic Appraisal Package: Economic Appraisal Report [APP-526] describes the methodologies used to appraise the economic, environmental, social benefits, disbenefits, revenues and costs of the Project and presents the appraisal results. The appraisal informs the Project's VfM

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			assessment. The appraisal, which uses outputs from the Lower Thames Area Model (LTAM) transport model, aligns with the principles in HM Treasury Green Book (HM Treasury, 2022) and is based on the methodologies in the DfT's Transport Analysis Guidance (TAG).
		Concerns regarding the Project's impacts on air quality, including particulate levels	The air quality assessment for the Project is presented within ES Chapter 5: Air Quality [**APP-143**]. The impact of the Project on human receptors from air quality is not considered to be significant, and the Project is not predicted to affect the UK's reported ability to comply with the Air Quality Directive. The targets for particulate matter where particles are less than 2.5 micrometres in diameter (PM2.5), as set out in the Environment Act 2021 and the Environment Improvement Plan, were enacted following the submission of the Development Consent Order (DCO). It is currently not possible to determine how the Project would affect compliance with the PM2.5 targets as there is no guidance from Defra on how the targets should be considered in the planning process. The air quality assessment demonstrates that the Project would comply with the current legal thresholds for PM2.5. Air quality modelling confirmed that there would be no exceedances of the annual mean PM2.5 AQS objective of 25µg/m^3 and the annual mean PM2.5 Limit Value of 20µg/m^3 across the study area in both the Do-Minimum and Do-Something scenarios of the construction and operational phases. The Project would have a significant air quality effect on a number of designated sites and habitats as a result of an increase in nitrogen deposition. Compensation is provided in the form of the creation of new areas of planting and habitat creation, which are set out in ES Appendix 5.6: Project Air Quality Action Plan [**APP-350**].
		Comments expressing concern that the Project's flood risk assessment has not accounted for the effects of climate change	A Flood Risk Assessment (FRA) for the Project is provided in ES Appendix 14.6 [**APP-460** to **APP-477** and **REP1-171**]. The FRA demonstrates how flood risk would be managed over the operational life of the Project, taking climate change into account. The FRA follows the methodology set out in the Design Manual for Roads and Bridges (DMRB), and relevant guidance including Environment Agency (EA) and Lead Local Flood Authority publications that give, for example, direction on applying climate change allowances and managing surface water runoff from development. This assessment has been undertaken in accordance with relevant legislation and having regard to national and local plans and policies. The design of the Project and its associated mitigation, including the use of culverts, has considered the potential for water quality, flows, and levels of groundwater and surface

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			water to be affected by road drainage during construction and operation. With the implementation of proposed mitigation measures and allowance for projected climate change effects, no likely significant effects on road drainage and the water environment, including waters used for agricultural irrigation or fishing purposes, are predicted during construction and operation of the Project. Areas such as homes and playing fields would be similarly unaffected. Areas of land to the north of the River Thames around the proposed North Portal site are currently at risk from flooding due to the low-lying geography of the area. Construction activities could increase the risk of river flooding through, for example, the creation of earthworks causing the loss of floodplain storage. As construction of the Project would remove some of the floodplain storage, the Project design would provide compensatory flood storage elsewhere to offset this. The size of these areas has been calculated to ensure the compensation would be adequate. Compensatory flood storage areas would be located in land adjacent to the Mardyke and the Mardyke West Tributary. Compensatory flood storage would also be provided in the upstream catchment of West Tilbury Main. The Applicant does not expect construction to have any impact on the River Thames flood defences and would monitor the integrity of the defences during construction. The deep cuttings required for the Project would have retaining walls and seepage control systems in place to limit the ingress of groundwater. Powers are sought within the draft DCO [**REP1-042**] for the Applicant to undertake works affecting watercourses and Schedule 14, Part 3 of the draft DCO includes Protective Provisions for the protection of local drainage authorities.
		Comments expressing concern about the Applicant's public consultations, including concerns that the information provided was misleading or lacked detail, and that consultation feedback was misrepresented or not considered.	The pre-application consultation was carried out to the required standard as evidenced in the Consultation Report, as ratified by the Planning Inspectorate in accepting the Application.
		Comments expressing concern with the safety and design of smart motorways	Safety is National Highways' highest priority. The design of the A122 seeks to further enhance safety, beyond that of a conventional All Purpose Trunk Roads (APTRs), through addition of technology services and features to better support the road user. APTRs have

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
		and the use of such features on the Project.	been in existence for many years and are used regularly by the public. Like other ATPRs, the A122 will typically have 1m nearside and offside hard strips and no hard shoulder. Therefore, the appropriate design and operation for the A122 is that of an APTR with enhanced safety an operational features. The key design philosophy is that A122 is an APTR, not a motorway or ALR motorway. The operation of APTRs without hard shoulders is not a recent development. There are many hundreds of miles of APTR, without hard shoulder, currently in operation across the country which are used by millions of road users each year. Whilst there are many facets involved in determining the design and operating regime for a road, key factors for the A122 are as follows: a. User safety. b. The A122 is new build and not a conversion of an existing road. c. Purpose of route and route consistency, taking into account the interfaces that the A122 has with APTRs (A2, A13, A1089), M25 and the local road network. d. Operation of the road tunnel Further information is provided in 9.17 Issue Specific Hearing 1 Action number 3 Design and operational distinction between an all purpose trunk road (APTR) and smart motorway [**REP1-196**]
		Comments expressing concern that the Project has not considered alternative modes of transport, including rail	As set out in Section 5.3 of the Planning Statement [**APP-495**], the role that other transport modes, including rail, might play in addressing congestion at the Dartford Crossing has been considered from the outset. The provision of a new rail freight crossing of the River Thames, or any other rail freight improvements, as an alternative to the Lower Thames Crossing is not a viable or realistic alternative to the Lower Thames Crossing because there are insufficient rail intermodal distribution terminals or other facilitating infrastructure to support a transfer from road to rail freight and it is unlikely this will change significantly in the near future, as set out in paragraphs 5.3.9 and 5.3.17 of the Planning Statement [**APP-495**]. The provision of new passenger rail services crossing of the River Thames as an alternative to a Road Crossing is also not considered to be a viable or realistic alternative as set out in paragraph 5.3.16 of the Planning Statement [**APP-495**]. Further information is provided in Annex B.2 Rail Alternatives of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
		Comments expressing concern that the Project is not future-proofed	The Scheme Objectives are recorded in the Need for the Project [**APP-494**]. They were agreed between the Applicant and the Department for Transport, and include the requirement to relieve the congested Dartford Crossing and its approach roads. Table 4.2 of the Planning Statement [**APP-495**] provides a summary of how the key benefits of the Project support the Scheme Objectives. The benefits of the Project are such that it is the right solution to the issues identified and the Project would support the Scheme Objectives.

REP1-348 Graham Neill

<table>
<tr><th>Rep ID</th><th>WR Submitter</th><th>WR/Overview/Applicant's Response</th></tr>
<tr><td rowspan="2">REP1-348</td><td rowspan="2">Graham Neill</td><td>WR:
WR link: REP1-348</td></tr>
<tr><td>
Overview:
REP1-348 raised issues on the following topics:

The need for the Project, including its cost.
Impacts of living near the Project, including noise and air pollution.
Environmental impacts and their management.
Invest in maintaining existing roads.
Provide better, cheaper bus and train services

The following table provides the Applicant's responses to those issues.
<table>
<tr><th>WR summary</th><th>Response</th></tr>
<tr><td>The need for the Project, including its cost.</td><td>The Scheme Objectives are recorded in the Need for the Project [APP-494]. They were agreed between the Applicant and the Department for Transport, and include the requirement to relieve the congested Dartford Crossing and its approach roads.

Table 4.2 of the Planning Statement [APP-495] provides a summary of how the key benefits of the Project support the Scheme Objectives. The benefits of the Project are such that it is the right solution to the issues identified and the Project would support the Scheme Objectives.

In Annex A of Post-event submissions, including written submission of oral comments, for ISH1 [REP1-183], Section A.2 explains how the reduction of traffic at the Dartford Crossing is linked to the benefits of the Project:

'To understand the performance of the Dartford Crossing, in scenarios with and without the proposed A122 Lower Thames Crossing (ie the Do Minimum and Do Something scenarios) it is the journey time benefits and the journey time reliability benefits that provide the means to understand the benefits of the project, and to assess whether the proposed new road would continue to provide relief to the Dartford Crossing into the future.'</td></tr>
</table>
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Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			Achieving value for money is one of the Scheme Objectives and a Value for Money (VfM) assessment has been carried out. As detailed in the Need for the Project [**APP-494**] it represents positive value for money as the substantial benefits of the Project outweigh the costs. The Economic Appraisal Report (EAR) within Appendix D: Economic Appraisal Package of the Combined Modelling and Appraisal Report (ComMA) [**APP-526**] describes the methodologies used to appraise the economic, environmental, social benefits, disbenefits, revenues and costs of the Project and presents the appraisal results. The appraisal informs the Project's VfM assessment. The appraisal, which uses outputs from the Lower Thames Area Model (LTAM) transport model, aligns with the principles in HM Treasury Green Book (HM Treasury, 2022) and is based on the methodologies in the DfT's Transport Analysis Guidance (TAG).
		Impacts of living near the Project, including noise and air pollution.	The Applicant has carried out a Health and Equalities Impact Assessment (HEqIA) [**APP-539**], which considers the Project's impacts during construction and operation on the health and wellbeing of local communities covering a number of topics including severance, accessibility, work and training, access to open spaces and mental health and wellbeing. The HEqIA also considers the impacts on those protected by equalities legislation, such as children, older people, disabled people, and those with pre-existing health conditions, accounting for the impacts during construction and operation phases. As well as the assessments documented in the HEqIA, Environmental Statement Chapter 13: Population and Human Health [**APP-151**] describes how local communities could be affected by the construction and operation of the Project and explains the ways in which these impacts would be reduced. The ES also includes assessments of the Project's impacts on specific aspects of the environment, including ES Chapter 12: Noise and Vibration [**APP-150**] and ES Chapter 5: Air Quality [**APP-143**]. The range of controls and mitigation measures that would be used to limit or avoid impacts on local communities during construction are secured through their inclusion in the REAC, which forms part of ES Appendix 2.2: Code of Construction Practice [**REP1-157**].
		Environmental impacts and their management.	Minimising adverse impacts on the environment is one of the Scheme Objectives agreed between the Applicant and the Department for Transport, which are recorded in the Need for the Project [**APP-494**]. Table 4.2 of the Planning Statement [**APP-495**] provides a summary of how the key benefits of the Project support the Scheme Objectives. The benefits of the Project are

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			such that it is the right solution to the issues identified and the Project would support the Scheme Objectives.
		Invest in maintaining existing roads, and provide better, cheaper bus and train services	The Applicant notes the comments regarding existing roads, and bus and train services. The Applicant is responsible for developing and managing the Strategic Road Network. The Scheme Objectives are recorded in the Need for the Project [**APP-494**]. They were agreed between the Applicant and the Department for Transport, and include the requirement to relieve the congested Dartford Crossing and its approach roads.

REP1-363 James Willis

<table>
<tr><th>Rep ID</th><th>WR Submitter</th><th>WR/Overview/Applicant's Response</th></tr>
<tr><td rowspan="2">REP1-363</td><td rowspan="2">James Willis</td><td>WR:
WR link: REP1-363</td></tr>
<tr><td>Overview:
REP1-363 raised issues on the following topics:
Invest in rail/public transport/existing road network
Climate
Need case/BCR
Traffic (induced demand)
Design - Smart motorway
Biodiversity / ancient woodland
Agricultural land/soil
Air quality - PM2.5 / Noise
The following table provides the Applicant's responses to those issues.
<table>
<tr><th>WR summary</th><th>Response</th></tr>
<tr><td>Claims that the Project does little to answer provision for cross-river active travel, and is not viable for public transport due to lack of adequate connections.</td><td>The Applicant has considered a range of options during the development of the Project to provide improved cross-river provision for walkers and cyclists. The options investigated include using the tunnel, upgrading the existing ferry, relocating the ferry, building a separate bridge or cable car, and providing a shuttle service through the tunnel. These options were not taken forward for a variety of reasons including technical feasibility, operational issues, lack of commercial viability, cost, environmental impacts, and poor safety.
Latent demand for walking and cycling across the River Thames at the Project crossing point is low and therefore unlikely to unlock enough trips to make the required infrastructure for a dedicated shuttle service economically viable. Page 48 of the Project Design Report Part G: Design Evolution [APP-514] provides further information. In</td></tr>
</table></td></tr>
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Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			addition, Section 5.3 in Chapter 5 of the Planning Statement [**APP-495**] provides an overview of the assessment undertaken on alternative modes of transport The Project would create opportunities for public transport operators to develop new local and regional bus services, by providing new connectivity between Kent, Thurrock and Essex. Identification and development of these routes is the responsibility of the relevant operators. Local buses will not have to pay the user charge for the Lower Thames Crossing, reducing operating costs for operators as is set out in Section 2.2 of the Road User Charging Statement [**APP-517**]. Further information on cross-river active travel and public transport is provided in Annex E of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].
		Lack of consideration of Freight and passenger Rail alternatives and evidence relied upon predate COP 26 and Net Zero targets.	As set out in Section 5.3 of the Planning Statement [**APP-495**], the role that other transport modes, including rail, might play in addressing congestion at the Dartford Crossing has been considered from the outset. The provision of a new rail freight crossing of the River Thames, or any other rail freight improvements, as an alternative to the Lower Thames Crossing is not a viable or realistic alternative to the Lower Thames Crossing because there are insufficient rail intermodal distribution terminals or other facilitating infrastructure to support a transfer from road to rail freight and it is unlikely this will change in significantly in the near future, as set out in paragraphs 5.3.9 and 5.3.17 of the Planning Statement [**APP-495**]. The provision of new passenger rail services crossing of the River Thames as an alternative to a Road Crossing is also not considered to be a viable or realistic alternative as set out in paragraph 5.3.16 of the Planning Statement [**APP-495**]. The Applicant awaits the UK Government's response to the recommendations set out in the Climate Change Committee's progress report to Parliament, published on 28 June 2023 and will continue to support the Department for Transport in decarbonising the transport sector. The Applicant has set out its own pathway to supporting the Department for Transport's decarbonisation of the surface transport sector through the publication of their 2021 plan 'Net Zero highways: Our 2030, 2040 and 2050 plan' (National Highways, 2021). The Project is setting out an industry-leading position in terms of driving out carbon in the preliminary design and setting a framework to continue to reduce its carbon impact through the commitments made in the Carbon and Energy Management Plan, which is one of three documents addressing carbon reduction in the DCO Application:

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			• Planning Statement Appendix I: Carbon Strategy and Policy Alignment [**APP-504**] states that '*the Project represents a step change in approach for a road scheme of this scale, in terms of the scope and nature of the measures which the Applicant is committing to deliver to reduce emissions during the construction and operation of the new road. Together with the policies which the Government has set out in its Decarbonising Transport Plan (2021), these measures ensure that the Project is aligned with a trajectory to net zero and that the Project's emissions would not therefore be significant, in accordance with relevant guidance.*' • Carbon and Energy Management Plan [**APP-552**]. • ES Chapter 15: Climate [**APP-153**]. Additionally, a review and the Project's response to legislation, policies and plans relevant to climate is presented in ES Appendix 15.1: Climate Legislation and Policy [**APP-480**]. A second iteration of the Carbon and Energy Management Plan [**APP-552**] would be used to demonstrate the implementation of the carbon commitments secured through the DCO during the construction phase and would set out the ways in which appointed Contractors would demonstrate that carbon emissions are kept within the defined limits. The Project has a commitment to implement the PAS2080 'Carbon Management in Infrastructure' standard, and each Contractor's plan would be refreshed annually to demonstrate it remains consistent with emerging best practice and aligned with their emissions pathway.
		Claims the Project is not good value for money with a benefit-cost-ratio (BCR) of only 1.22	Achieving value for money is one of the Scheme Objectives and a Value for Money (VfM) assessment has been carried out. As detailed in the Need for the Project [**APP-494**] it represents positive value for money as the substantial benefits of the Project outweigh the costs. The Economic Appraisal Report (EAR) within Appendix D: Economic Appraisal Package of the Combined Modelling and Appraisal Report (ComMA) [**APP-526**] describes the methodologies used to appraise the economic, environmental, social benefits, disbenefits, revenues and costs of the Project and presents the appraisal results. The appraisal informs the Project's VfM assessment. The appraisal, which uses outputs from the Lower Thames Area Model (LTAM) transport model, aligns with the principles in HM Treasury Green Book (HM Treasury, 2022) and is based on the methodologies in the DfT's Transport Analysis Guidance (TAG). The Applicant's position is that the Benefit Cost Ratio (BCR) of the Project is robust, measurable and has been undertaken in line with the DfT's Transport Analysis Guidance (TAG), as set out in the Combined Modelling and Appraisal Report [**APP-526**]

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			The assured costs, as presented in the application, take into account labour, material and inflation. These adequately represent the Applicant's current position in relation to these cost items. The net scheme costs were assured by the Applicant in February 2022 as stated in Table 4.4 of the Combined Modelling and Appraisal Report, Appendix D [**APP-526**]. Further information is provided in Section 4.8 and Annex H of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**]
		Claims that roads induce traffic and generate more traffic above background trends, and that the Project would not solve problems at Dartford	The DCO Application includes a Wider Network Impacts Management and Monitoring Plan which sets out the Applicant's approach on the forecast wider network impacts of the Project [**APP-545**]. The creation of new capacity on the road network will lead to changes in the way people travel. Some people will choose to make different journeys because shorter or less congested routes become available, and some people who would not previously have travelled will choose to make new journeys because the faster or shorter journey becomes more affordable. As a result, there will be changes in the lengths of journeys made, and in the total number of journeys made. The net increase in kilometres driven is highest in the PM peak hour, with an overall increase of 1.1% in 2030 and 1.23% in 2045. Further information is provided in Section A.3 New and longer trips in Annex A of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**]. The Scheme Objectives are recorded in the Need for the Project [**APP-494**]. They were agreed between the Applicant and the Department for Transport, and include the requirement to relieve the congested Dartford Crossing and its approach roads. Table 4.2 of the Planning Statement [**APP-495**] provides a summary of how the key benefits of the Project support the Scheme Objectives. The benefits of the Project are such that it is the right solution to the issues identified and the Project would support the Scheme Objectives. In Annex A of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**], Section A.2, explains how the reduction of traffic at the Dartford Crossing is linked to the benefits of the Project: '*To understand the performance of the Dartford Crossing, in scenarios with and without the proposed A122 Lower Thames Crossing (ie the Do Minimum and Do Something scenarios) it is the journey time benefits and the journey time reliability benefits that provide the means to understand the benefits of the project, and to assess whether the*

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			proposed new road would continue to provide relief to the Dartford Crossing into the future.'
		Claims the Project lacks adequate connections, especially when there are incidents	The main considerations for connectivity with the surrounding road network were likely journey origins and destinations, physical and environmental constraints, compatibility of junction location and type, and suitability for use on an All-Purpose Trunk Road. The desire to provide more local connections to and from the Project must be balanced against the need to ensure free-flowing connections with the SRN and safety for all road users. Other considerations are increased traffic on local roads arising from additional connections and increased environmental effects associated with large junctions. Where direct local connections are not provided, it is generally possible to connect to the Project by first joining roads on the SRN that are served by the proposed junctions. The Applicant does not agree with the comment made in this Written Representation. The Applicant is responsible for managing the Strategic Road Network in the event of an incident. Further information on the Project's connectivity with the surrounding road network is provided in section 4.5.3 of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].
		Safety concerns since the proposed LTC would be a 'Smart' Motorway	Safety is National Highways' highest priority. The design of the A122 seeks to further enhance safety, beyond that of a conventional All Purpose Trunk Roads (APTRs), through addition of technology services and features to better support the road user. APTRs have been in existence for many years and are used regularly by the public. Like other ATPRs, the A122 will typically have 1m nearside and offside hard strips and no hard shoulder. Therefore, the appropriate design and operation for the A122 is that of an APTR with enhanced safety and operational features. The key design philosophy is that A122 is an APTR, not a motorway or ALR motorway. The operation of APTRs without hard shoulders is not a recent development. There are many hundreds of miles of APTR, without hard shoulder, currently in operation across the country which are used by millions of road users each year. Whilst there are many facets involved in determining the design and operating regime for a road, key factors for the A122 are as follows: a. User safety. b. The A122 is new build and not a conversion of an existing road. c. Purpose of route and route consistency, taking into account the interfaces that the A122 has with APTRs (A2, A13, A1089), M25 and the local road network.

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			d. Operation of the road tunnel. Further information is provided in 9.17 Issue Specific Hearing 1 Action number 3 Design and operational distinction between an all purpose trunk road (APTR) and smart motorway [**REP1-196**].
		Concerns about the Project causing an increase in carbon emissions	The Project is setting out an industry-leading position in terms of driving out carbon in the preliminary design and setting a framework to continue to reduce its carbon impact through the commitments made in the Carbon and Energy Management Plan, which is one of three documents addressing carbon reduction in the DCO Application: • Planning Statement Appendix I: Carbon Strategy and Policy Alignment [**APP-504**] states that '*the Project represents a step change in approach for a road scheme of this scale, in terms of the scope and nature of the measures which the Applicant is committing to deliver to reduce emissions during the construction and operation of the new road. Together with the policies which the Government has set out in its Decarbonising Transport Plan (2021), these measures ensure that the Project is aligned with a trajectory to net zero and that the Project's emissions would not therefore be significant, in accordance with relevant guidance.*' • Carbon and Energy Management Plan [**APP-552**]. • ES Chapter 15: Climate [**APP-153**] Additionally, a review and the Project's response to legislation, policies and plans relevant to climate is presented in ES Appendix 15.1: Climate Legislation and Policy [**APP-480**]. A second iteration of the Carbon and Energy Management Plan [**APP-552**] would be used to demonstrate the implementation of the carbon commitments secured through the DCO during the construction phase and would set out the ways in which appointed Contractors would demonstrate that carbon emissions are kept within the defined limits. The Project has a commitment to implement the PAS2080 'Carbon Management in Infrastructure' standard, and each Contractor's plan would be refreshed annually to demonstrate it remains consistent with emerging best practice and aligned with their emissions pathway.
		Concerns about the loss and impact to thousands of acres of farmland threatening food security.	Environmental Statement Chapter 10: Geology and Soils [**APP-148**] presents an assessment of likely significant effects on soil resources and BMV land. ES Appendix 10.4: Agricultural Land Classification Factual Report [**APP-425**] presents the outputs of the survey and has informed the baseline of ES Chapter 10. The Applicant has taken reasonable and practicable steps to minimise and mitigate for the likely significant effects. The design has been optimised to minimise the land take required to construct and operate the Project. The route optioneering phase and design

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			development considered the presence of higher-quality agricultural land alongside other environmental and design constraints. Where agricultural land cannot be avoided, soil management measures to minimise the adverse effects of soil disturbance and handling during the construction phase are described in ES Chapter 10: Geology and Soils [**APP-148**] and secured through their inclusion in the REAC, which forms part of the Code of Construction Practice [**REP1-157**].
		Claims the Project would destroy and impact woodland (including ancient woodland), trees (including ancient/veteran), hedgerows, greenbelt and would have a devastating impact on wildlife and habitat, including protected species.	The Applicant has provided a detailed assessment of the Project and its impact on the Green Belt in Planning Statement Appendix E [**APP-500**]. This demonstrates that the Project is compliant with national policy which is permissive of 'inappropriate development' in the Green Belt in 'very special circumstances'.
		Claims the Project would increase air and noise pollution, and the route fails on WHO-10 levels for PM2.5	The Applicant has assessed the air quality impacts of both the operation and construction of the Project in ES Chapter 5 [**APP-143**], and proposed measures to manage these impacts where appropriate are outlined in the CoCP and REAC [**REP1-157**]. The air quality assessment reported in ES Chapter 5: Air Quality [**APP-143**] demonstrates that the Project would comply with the current legal thresholds for PM2.5. Air quality modelling confirmed that there would be no exceedances of the annual mean PM2.5 AQS objective of 25µg/m3 and the annual mean PM2.5 Limit Value of 20µg/m^3 across the study area in both the Do-Minimum and Do-Something scenarios of the construction and operational phases. The Applicant has carried out an assessment of the likely significant effects of the Project on noise and vibration during construction and operation, which is set out in ES Chapter 12: Noise and Vibration [**APP-150**]. The assessment considers potential changes to noise and vibration levels at identified noise sensitive receptors due to construction activities, as well as changes to road traffic noise levels and the tunnel ventilation system noise during operation. Sections 12.5 and 12.6 of ES Chapter 12 [**APP-150**] present the Applicant's proposed mitigation during the Project's construction and operation, along with the predicted residual impacts and resultant significant effects on noise and vibration.

Rep ID	WR Submitter	WR/Overview/Applicant's Response		
			The range of controls and mitigation measures that would be used to limit or avoid impacts on local communities are secured through their inclusion in the REAC, which forms part of ES Appendix 2.2: Code of Construction Practice [**REP1-157**].	

REP1-364 John Elliott

<table>
<tr><th>Rep ID</th><th>WR Submitter</th><th>WR/Overview/Applicant's Response</th></tr>
<tr><td rowspan="2">REP1-364</td><td rowspan="2">John Elliott</td><td>WR:
WR link: REP1-364</td></tr>
<tr><td>Overview:
REP1-364 raised issues on the following topics:
• Concerns expressed about the methods used by the Applicant to quantify economic benefits of the Project, and a suggestion that the stated benefit-cost ratio is too low.
• Comments expressing concern at the Project's cost and whether it provides value for money
• Comments expressing concern about the need for the Project, whether the Project would achieve its objective of providing congestion relief at the Dartford Crossing, possible traffic growth as a result of the Project, the design capacity of the proposed road, and increased congestion on the wider road network.
• Concerns about the Project's impact on the climate, and whether the proposals reflect government policy and international agreements
• Claims that the Project's transport model does not reflect actual conditions or consider induced demand
• Impact of road closures on local residents during construction
The following table provides the Applicant's responses to those issues.
<table>
<tr><th>WR summary</th><th>Response</th></tr>
<tr><td>Comments expressing concern at the Project's cost, whether it provides value for money, about the methods used by the Applicant to quantify economic benefits of the Project, and a suggestion that the stated benefit-cost ratio is too low.</td><td>Achieving value for money is one of the Scheme Objectives and a Value for Money (VfM) assessment has been carried out. As detailed in the Need for the Project [APP-494] it represents positive value for money as the substantial benefits of the Project outweigh the costs.
The Economic Appraisal Report (EAR) within Appendix D: Economic Appraisal Package of the Combined Modelling and Appraisal Report (ComMA) [APP-526] describes the methodologies used to appraise the economic, environmental, social benefits, disbenefits, revenues and costs of the Project and presents the appraisal results. The appraisal informs the Project's VfM assessment. The appraisal, which uses outputs from the Lower Thames Area Model (LTAM) transport model, aligns with the principles in HM</td></tr>
</table></td></tr>
</table>

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			Treasury Green Book (HM Treasury, 2022) and is based on the methodologies in the DfT's Transport Analysis Guidance (TAG). The Applicant's position is that the Benefit Cost Ratio (BCR) of the Project is robust, measurable and has been undertaken in line with the DfT's Transport Analysis Guidance (TAG), as set out in the Combined Modelling and Appraisal Report [**APP-526**] The assured costs, as presented in the application, take into account labour, material and inflation. These adequately represent the Applicant's current position in relation to these cost items. The net scheme costs were assured by the Applicant in February 2022 as stated in Table 4.4 of the Combined Modelling and Appraisal Report, Appendix D [**APP-526**]. Further information is provided in Section 4.8 and Annex H of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].
		Comments expressing concern over the Project's ability to fulfil its Scheme Objectives, including congestion relief at Dartford, linked to concerns over the transport modelling and assumptions.	The Scheme Objectives are recorded in the Need for the Project [**APP-494**]. They were agreed between the Applicant and the Department for Transport, and include the requirement to relieve the congested Dartford Crossing and its approach roads. Table 4.2 of the Planning Statement [**APP-495**] provides a summary of how the key benefits of the Project support the Scheme Objectives. The benefits of the Project are such that it is the right solution to the issues identified and the Project would support the Scheme Objectives. In Annex A of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**], Section A.2, explains how the reduction of traffic at the Dartford Crossing is linked to the benefits of the Project: '*To understand the performance of the Dartford Crossing, in scenarios with and without the proposed A122 Lower Thames Crossing (ie the Do Minimum and Do Something scenarios) it is the journey time benefits and the journey time reliability benefits that provide the means to understand the benefits of the project, and to assess whether the proposed new road would continue to provide relief to the Dartford Crossing into the future.*' The DCO Application includes a Wider Network Impacts Management and Monitoring Plan which sets out the Applicant's approach on the forecast wider network impacts of the Project [**APP-545**]. The creation of new capacity on the road network will lead to changes in the way people travel. Some people will choose to make different journeys because shorter or less congested routes become available, and some people who would not previously have

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			travelled will choose to make new journeys because the faster or shorter journey becomes more affordable. As a result, there will be changes in the lengths of journeys made, and in the total number of journeys made. The net increase in kilometres driven is highest in the PM peak hour, with an overall increase of 1.1% in 2030 and 1.23% in 2045. Further information is provided in section A.3 New and longer trips in Annex A of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**],
		Concerns about the Project's impact on the climate, and whether the proposals reflect government policy and international agreements	The Project is setting out an industry-leading position in terms of driving out carbon in the preliminary design and setting a framework to continue to reduce its carbon impact through the commitments made in the Carbon and Energy Management Plan, which is one of three documents addressing carbon reduction in the DCO Application: • Planning Statement Appendix I: Carbon Strategy and Policy Alignment [**APP-504**] states that '*the Project represents a step change in approach for a road scheme of this scale, in terms of the scope and nature of the measures which the Applicant is committing to deliver to reduce emissions during the construction and operation of the new road. Together with the policies which the Government has set out in its Decarbonising Transport Plan (2021), these measures ensure that the Project is aligned with a trajectory to net zero and that the Project's emissions would not therefore be significant, in accordance with relevant guidance.*' • Carbon and Energy Management Plan [**APP-552**]. • ES Chapter 15: Climate [**APP-153**] Additionally, a review and the Project's response to legislation, policies and plans relevant to climate is presented in ES Appendix 15.1: Climate Legislation and Policy [**APP-480**]. A second iteration of the Carbon and Energy Management Plan [**APP-552**] would be used to demonstrate the implementation of the carbon commitments secured through the DCO during the construction phase and would set out the ways in which appointed Contractors would demonstrate that carbon emissions are kept within the defined limits. The Project has a commitment to implement the PAS2080 'Carbon Management in Infrastructure' standard, and each Contractor's plan would be refreshed annually to demonstrate it remains consistent with emerging best practice and aligned with their emissions pathway.

REP1-365 Julian Howes

<table>
<tr><th>Rep ID</th><th>WR Submitter</th><th>WR/Overview/Applicant's Response</th></tr>
<tr><td rowspan="2">REP1-365</td><td rowspan="2">Julian Howes</td><td>WR:
WR link: REP1-365</td></tr>
<tr><td>Overview:
REP1-365 raised issues on the following topics:
The need for the Project, including other alternative proposals
Assessment of environmental impacts on Thurrock
Impacts on the Green Belt
Noise impacts on Thurrock
Air quality impacts on Thurrock
Landscape impacts
The status of the Applicant's Statements of Common Ground
The appropriateness of the base data for transport modelling, the Combined Modelling and Appraisal Report, and the Transport Assessment.
Wider Network Issues
The following table provides the Applicant's responses to those issues.
<table>
<tr><th>WR summary</th><th>Response</th></tr>
<tr><td>The need for the Project</td><td>The Scheme Objectives are recorded in the Need for the Project [APP-494]. They were agreed between the Applicant and the Department for Transport, and include the requirement to relieve the congested Dartford Crossing and its approach roads.
Table 4.2 of the Planning Statement [APP-495] provides a summary of how the key benefits of the Project support the Scheme Objectives. The benefits of the Project are such that it is the right solution to the issues identified and the Project would support the Scheme Objectives.</td></tr>
<tr><td>Assessment of environmental impacts on Thurrock</td><td>The Applicant notes the concerns regarding the Project's impacts on Stanford le Hope and the wider area.</td></tr>
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Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			The Application is accompanied by an Environmental Statement [**APP-139**] that provides evidence of the assessment of impacts and proposed mitigation measures associated with the Project, which has been prepared in accordance with published and agreed methodologies.
		Impacts on the Green Belt	The Applicant has provided a detailed assessment of the Project and its impact on the Green Belt in Planning Statement Appendix E [**APP-500**]. This demonstrates that the Project is compliant with national policy which is permissive of 'inappropriate development' in the Green Belt in 'very special circumstances'.
		Noise impacts on Thurrock	The Applicant has assessed the potential noise impacts from both the operation and construction of the Project and proposes mitigation measures to manage this impact. This is reported in ES Chapter 12 [**APP-150**] and the control measures are detailed in the CoCP and REAC [**REP1-157**].
		Air quality impacts on Thurrock	The Applicant has assessed the air quality impacts of both the operation and construction of the Project in ES Chapter 5 [**APP-143**], and proposed measures to manage these impacts where appropriate are outlined in the CoCP and REAC [**REP1-157**].
		Landscape impacts	The Applicant has assessed the impacts of both the operation and construction of the Project on the surrounding landscape in ES Chapter 7 [**APP-145**], and proposed measures to manage these impacts where appropriate are outlined in the CoCP and REAC [**REP1-157**].
		The status of Statements of Common Ground	The Applicant has prepared Statements of Common Ground [**APP-093**] with the relevant interested parties and will continue through the Examination process to seek to resolve matters as appropriate.
		The appropriateness of the base data for transport modelling, the Combined Modelling and Appraisal Report, and the Transport Assessment.	The Applicant's traffic modelling has been carried out in accordance with the transport analysis guidance from the Department for Transport (DfT) and using data available from 2016. Due to changes in traffic flows as a result of the COVID-19 pandemic, data from after 2019 would not have been suitable for the Applicant's traffic modelling. The traffic model data is collated and used in accordance with DfT guidance. The Applicant's transport model covers in detail the roads in Kent, Thurrock, Essex and Havering, as well as the eastern part of Greater London, extending out to major roads within the area around the entire M25, and including a wider road network that extends across the whole of England, Scotland and Wales. This area is appropriate because it models all of the primary roads likely to be affected by the Project. While the modelling includes forecasts for some minor roads, it is outside the scope of this type of strategic

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			modelling to provide street-by-street predictions of how traffic flows would change once the Project is operational. For more information about how the Applicant has carried out traffic modelling following industry best practice, refer to the Combined Modelling and Appraisal Report [**APP-518**], including Appendices A, B and C [**APP-519** to **APP-523**]. A summary of the methodology is included in Traffic Forecasts Non-Technical Summary [**APP-528**].
		Wider Network Issues	The Application for DCO is accompanied with a Wider Network Impacts Management and Monitoring Plan which sets out the Applicant's approach to this concern [**APP-545**].

REP1-374 Ken Bowman

<table>
<tr><th>Rep ID</th><th>WR Submitter</th><th>WR/Overview/Applicant's Response</th></tr>
<tr><td rowspan="2">REP1-374</td><td rowspan="2">Ken Bowman</td><td>WR:
WR link: REP1-374</td></tr>
<tr><td>Overview:
REP1-374 raised issues on the following topics:
• Reliability of the cost/benefit analysis used for the DCO Application
• Concern that the alternative option of providing a new and longer tunnel at Dartford was unreasonably rejected.
• The following table provides the Applicant's responses to those issues.
<table>
<tr><th>WR summary</th><th>Response</th></tr>
<tr><td>Reliability of the cost/benefit analysis used for the DCO Application</td><td>Achieving value for money is one of the Scheme Objectives and a Value for Money (VfM) assessment has been carried out. As detailed in the Need for the Project [APP-494] it represents positive value for money as the substantial benefits of the Project outweigh the costs.
The Economic Appraisal Report (EAR) within Appendix D: Economic Appraisal Package of the Combined Modelling and Appraisal Report (ComMA) [APP-526] describes the methodologies used to appraise the economic, environmental, social benefits, disbenefits, revenues and costs of the Project and presents the appraisal results. The appraisal informs the Project's VfM assessment. The appraisal, which uses outputs from the Lower Thames Area Model (LTAM) transport model, aligns with the principles in HM Treasury Green Book (HM Treasury, 2022) and is based on the methodologies in the DfT's Transport Analysis Guidance (TAG).</td></tr>
<tr><td>Concern that the alternative option of providing a new and longer tunnel at Dartford was unreasonably rejected.</td><td>The Scheme Objectives are recorded in the Need for the Project [APP-494]. They were agreed between the Applicant and the Department for Transport, and include the requirement to relieve the congested Dartford Crossing and its approach roads.
Table 4.2 of the Planning Statement [APP-495] provides a summary of how the key benefits of the Project support the Scheme Objectives. The benefits of the Project are such that it is the right solution to the issues identified and the Project would support the Scheme Objectives.</td></tr>
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Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			The Project has undergone a thorough assessment of route alternatives, which is presented in Chapter 5 of the Planning Statement [**APP-495**]. Section 5.4 sets out the key stages that led to the selection of the Preferred Route Announcement (PRA) by DfT, and subsequent reappraisal by the Project. With regard to Location A (Additional Capacity at the Existing Dartford Crossing), the Applicant examined options for an additional tunnel or an additional bridge at this location. Table 5.10 sets out how these options were developed together as Route 1. The Applicant has regularly revisited the options selection process prior to the submission of the Application. The reassessment confirmed that: a. Route 1 could not be developed as a free-flowing 70mph solution, as the crossings and approaches would be restricted to 50mph. b. As traffic would still be funnelled through the existing M25/A282 corridor between junction 2 and junction 30, it would not provide resilience on the network. c. Despite lower costs than the preferred route, it delivered lower value for money as the economic benefits were substantially smaller. d. The additional traffic through the existing corridor would exacerbate existing air quality problems and lead to an overall noise disbenefit. The 2016 route options consultation contained information about why Location C was being pursued instead of Location A. This was a matter consultees were able to comment on, and indeed did so, leading to the preparation of a further assessment to support the decision. Further assessment on Location A (route 1) was undertaken following the close of the 2016 consultation. The Secretary of State set out the preferred route at Location C in 2017, and the basis for not selecting Location A (and specifically Route 1) were provided in Section 3.2 of the Post Consultation Scheme Assessment Report Volume 7 (Highways England, 2017).

REP1-381 Lauren Rayner

Rep ID	WR Submitter	WR/Overview/Applicant's Response
REP1-381	Lauren Rayner	**WR:** WR link: **REP1-381**
		Overview: **REP1-381** raised issues on the following topics: • Comments expressing concern that the Project's construction and operation would have negative impacts on the health of the local community • Comments expressing concern about the need for the Project, including whether Project would achieve its objective of providing congestion relief at the Dartford Crossing. • Comments expressing concern about the loss of Green Belt land and the potential development of new housing, industry, and other uses on Green Belt land. • Comments expressing concern about the Project's impacts on ancient woodland • Concerns regarding the Project's impacts on biodiversity, and whether a biodiversity net gain could be achievable • Comments expressing concern that the proposed mitigation is not sufficient to ensure the Project is policy compliant where severe permanent effects are predicted. • Comments expressing concern at the Project's cost and whether it provides value for money • Concerns regarding the Project's impacts on air quality, including particulate levels • Comments expressing concern about the impact of the Project on nitrogen deposition once the new road opens. Concerns were expressed about habitats, landscapes and the species they support being impacted • Comments expressing concern with the safety and design of smart motorways and the use of such features on the Project. • Comments expressing concern that the Project has not considered alternative modes of transport • Comments expressing concern about increased noise and vibration during the Project's construction and operation. • Comments expressing concern about potential light pollution as a result of the Project, with some respondents referring to impacts on the night sky and the landscape.

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<tr><th>Rep ID</th><th>WR Submitter</th><th>WR/Overview/Applicant's Response</th></tr>
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Concerns about the Project's impact on the climate, and whether the proposals reflect government policy and international agreements
Comments expressing concern about the Applicant's public consultations, including concerns that the information provided was misleading or lacked detail, and that consultation feedback was misrepresented or not considered.

The following table provides the Applicant's responses to those issues.
<table>
<tr><th>WR summary</th><th>Response</th></tr>
<tr><td>Comments expressing concern that the Project's construction and operation would have negative impacts on the health of the local community</td><td>ES Chapter 13: Population and Human Health [APP-151], describes how local communities could be affected by the construction and operation of the Project and explains the ways in which these impacts would be reduced. As well as the assessments documented in ES Chapter 13, the Applicant has carried out a Health and Equalities Impact Assessment (HEqIA) [APP-539], which considers the Project's impacts during construction and operation on the health and wellbeing of local communities covering a number of topics including severance, accessibility, work and training, access to open spaces and mental health and wellbeing. The HEqIA also considers the impacts on those protected by equalities legislation, such as children, older people, disabled people, and those with pre-existing health conditions, accounting for the impacts during construction and operation phases.

The range of controls and mitigation measures that would be used to limit or avoid impacts on local communities are secured through their inclusion in the REAC, which forms part of ES Appendix 2.2: Code of Construction Practice [REP1-157].</td></tr>
<tr><td>Comments expressing concern about the need for the Project, including whether Project would achieve its objective of providing congestion relief at the Dartford Crossing.</td><td>The Scheme Objectives are recorded in the Need for the Project [APP-494]. They were agreed between the Applicant and the Department for Transport, and include the requirement to relieve the congested Dartford Crossing and its approach roads.

Table 4.2 of the Planning Statement [APP-495] provides a summary of how the key benefits of the Project support the Scheme Objectives. The benefits of the Project are such that it is the right solution to the issues identified and the Project would support the Scheme Objectives.

In Annex A of Post-event submissions, including written submission of oral comments, for ISH1 [REP1-183], Section A.2 explains how the reduction of traffic at the Dartford Crossing is linked to the benefits of the Project:

'To understand the performance of the Dartford Crossing, in scenarios with and without the proposed A122 Lower Thames Crossing (ie the Do Minimum and Do Something scenarios) it is the journey time benefits and the journey time reliability benefits that</td></tr>
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Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			provide the means to understand the benefits of the project, and to assess whether the proposed new road would continue to provide relief to the Dartford Crossing into the future.'
		Comments expressing concern about the loss of Green Belt land and the potential development of new housing, industry, and other uses on Green Belt land.	The Applicant has provided a detailed assessment of the Project and its impact on the Green Belt in Planning Statement Appendix E [**APP-500**]. This demonstrates that the Project is compliant with national policy which is permissive of 'inappropriate development' in the Green Belt in 'very special circumstances'.
		Comments expressing concern about the Project's impacts on ancient woodland	The effects of the Project on Terrestrial Biodiversity have been assessed within Environmental Statement (ES) Chapter 8: Terrestrial Biodiversity [**APP-146**] including assessments of designated areas, such as Sites of Special Scientific Interest (SSSIs), and ancient woodlands and veteran trees. It is explained in Section 8.3 of ES Chapter 8 that the assessment has regard to both direct and indirect impacts, including severance or fragmentation of habitats or wildlife corridors. ES Chapter 8 describes the magnitude of the impacts, and the measures proposed to avoid, reduce, and compensate for the effects on sensitive ecological receptors, including ancient woodland and veteran trees. The Applicant recognises the irreplaceable nature of ancient woodland and veteran trees. Impacts upon ancient woodland and veteran trees have (amongst other environmental impacts) been considered throughout the route options selection process, and the Project's impacts on these areas have been reduced through its design, while still achieving the Scheme Objectives, as set out in the Need for the Project [**APP-494**]. This design is reported within the Planning Statement [**APP-495**], specifically Chapter 5: Project evolution and alternatives, and Chapter 8: Planning balance and conclusions. The Project would result in the direct the loss of 5.35ha of ancient woodland south of the River Thames, and 1.57ha north of the River Thames; a total of 6.92ha. Where these impacts on ancient woodland cannot be avoided, compensatory woodland planting is proposed to offset the impacts. While ancient woodland cannot be replaced, new woodland planting would be designed to strengthen connectivity between existing retained woodland areas, particularly around Shorne and Ashenbank Woods SSSI, Claylane Wood, Great Crabbles Wood SSSI and Jeskyns Community Woodland to the south of the A2/M2. North of the River Thames, ancient woodland compensation planting is primarily proposed around Folkes Lane and Hole Farm with some immediately adjacent to Rainbow Wood Shaw. This would build resilience into the wider network of designated

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			sites and habitats and support a large number of species. ES Figure 8.33 [**APP-294**] shows the locations of ancient woodland impacts and compensation planting areas.
		Concerns regarding the Project's impacts on biodiversity, and whether a biodiversity net gain could be achievable	The Project has been designed to maximise benefits to biodiversity primarily through the creation of new areas of high quality semi-natural habitat which will be managed appropriate in perpetuity and have been designed to create new and strengthen existing ecological networks, increasing their resilience to future pressures such as climate change. The habitat creation proposed for essential mitigation are appropriate to the adverse effects likely to occur during the Project's construction and operation and are ambitious in terms of the objectives to create high quality habitat. This has been the overarching approach to mitigation design, rather than looking to generate the highest biodiversity metric score possible within the Project's Order Limits. It should also be recognised that mandated biodiversity net gain requirements for Nationally Significant Infrastructure Projects would only apply where the application is made in 2025 or afterwards, and therefore will not apply to the A122 Lower Thames Crossing. The environmental mitigation and compensation figures relating to terrestrial biodiversity, together with any assumptions associated with those, are clearly set out in Environmental Statement Chapter 8: Terrestrial Biodiversity [**APP-146**] and Environmental Statement Appendix 8.21: Biodiversity Metric Calculations [**APP-417**].
		Comments expressing concern that the proposed mitigation is not sufficient to ensure the Project is policy compliant where severe permanent effects are predicted.	Actions have been taken when developing the Project to avoid and minimise negative social and environmental impacts through careful design, including embedded mitigation secured under Requirement 3 of the draft DCO **[REP1-042]** and essential mitigation under the Register of Environmental Actions and Commitments, which forms part of ES Appendix 2.2: CoCP [**REP1-157**]. The Control Plan, Plate 2.1 in the outline Landscape and Ecology Management Plan (oLEMP) [**REP1-173**], sets out how all the requirements in Schedule 2 of the draft DCO and control documents work together to manage the delivery of the Project in accordance with the application. Further controls are set out elsewhere in the CoCP, in the outline Traffic Management Plan for Construction [**REP1-174**] and in the Stakeholder Actions and Commitments Register [**REP1-176**]. The Project alignment was chosen to balance air quality, noise and visual effects, avoid heritage assets, and avoid impacts to the Thames Estuary and Marshes Ramsar site and Thames Estuary and Marshes Special Protection Area (SPA). Further refinements resulted in the provision of environmental mitigation, compensation and enhancement measures, such as habitat creation, landscaping and Public Rights of Way, the narrowing of the M2/A2 corridor through the Kent Downs Area of Outstanding Natural Beauty

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			(AONB) and Shorne Woods Country Park, the provision of new planting and green bridges, and the introduction of nitrogen deposition compensation sites within the Order Limits. Development of the Project's design is set out in the Project Design Report [**APP-506** to **APP-515**]. Where it has not been possible to mitigate impacts, compensatory measures are proposed. However, it is noted that there would be residual adverse impacts. The relevant planning policy principles are assessed in Chapter 6 and Appendix A of the Planning Statement [**APP-495** and **APP-496**], which demonstrates accordance with, for example, paragraph 3.3 of the NPSNN. Local planning policies are assessed in Chapter 7 and Appendix C of the Planning Statement [**APP-495** and **APP-498**]. An Environmental Impact Assessment (EIA) of the Project assesses its likely significant environmental effects and presents the proposed mitigation, including the measures referred to above. The residual significant environmental effects of the Project (following mitigation) are identified in each topic chapter in the ES and summarised in ES Chapter 17: Summary [**APP-155**]. Chapter 6 of the Planning Statement [**APP-495**] provides an assessment of the potential adverse effects of the Project set against the assessment principles and generic impacts assessment in the NPSNN, the relevant Energy NPSs, and other national and local policy where relevant.
		Comments expressing concern at the Project's cost and whether it provides value for money	Achieving value for money is one of the Scheme Objectives and a Value for Money (VfM) assessment has been carried out. As detailed in the Need for the Project [**APP-494**] it represents positive value for money as the substantial benefits of the Project outweigh the costs. The Economic Appraisal Report (EAR) within Appendix D: Economic Appraisal Package of the Combined Modelling and Appraisal Report (ComMA) [**APP-526**] describes the methodologies used to appraise the economic, environmental, social benefits, disbenefits, revenues and costs of the Project and presents the appraisal results. The appraisal informs the Project's VfM assessment. The appraisal, which uses outputs from the Lower Thames Area Model (LTAM) transport model, aligns with the principles in HM Treasury Green Book (HM Treasury, 2022) and is based on the methodologies in the DfT's Transport Analysis Guidance (TAG).
		Concerns regarding the Project's impacts on air	Achieving value for money is one of the Scheme Objectives and a Value for Money (VfM) assessment has been carried out. As detailed in the Need for the Project [**APP-494**] it

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
		quality, including particulate levels	represents positive value for money as the substantial benefits of the Project outweigh the costs. The Economic Appraisal Report (EAR) within Appendix D: Economic Appraisal Package of the Combined Modelling and Appraisal Report (ComMA) [**APP-526**] describes the methodologies used to appraise the economic, environmental, social benefits, disbenefits, revenues and costs of the Project and presents the appraisal results. The appraisal informs the Project's VfM assessment. The appraisal, which uses outputs from the Lower Thames Area Model (LTAM) transport model, aligns with the principles in HM Treasury Green Book (HM Treasury, 2022) and is based on the methodologies in the DfT's Transport Analysis Guidance (TAG).
		Comments expressing concern about the impact of the Project on nitrogen deposition once the new road opens. Concerns were expressed about habitats, landscapes and the species they support being impacted	The DCO Application provides 245ha of compensatory habitat, with details of the sites and how they were selected provided in the Environmental Statement (ES) Appendix 5.6: Project Air Quality Action Plan (PAQAP) [**APP-350**]. Nitrogen deposition compensation sites were selected using a site selection methodology developed in partnership with stakeholders including Natural England as explained in the PAQAP [**APP-350**]. Further information on the extent of the nitrogen deposition compensation is provided in Annex F of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].
		Comments expressing concern with the safety and design of smart motorways and the use of such features on the Project.	Safety is National Highways' highest priority. The design of the A122 seeks to further enhance safety, beyond that of a conventional All Purpose Trunk Roads (APTRs), through addition of technology services and features to better support the road user. APTRs have been in existence for many years and are used regularly by the public. Like other ATPRs, the A122 will typically have 1m nearside and offside hard strips and no hard shoulder. Therefore, the appropriate design and operation for the A122 is that of an APTR with enhanced safety and operational features. The key design philosophy is that A122 is an APTR, not a motorway or ALR motorway. The operation of APTRs without hard shoulders is not a recent development. There are many hundreds of miles of APTR, without hard shoulder, currently in operation across the country which are used by millions of road users each year. Whilst there are many facets involved in determining the design and operating regime for a road, key factors for the A122 are as follows: a. User safety. b. The A122 is new build and not a conversion of an existing road.

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			c. Purpose of route and route consistency, taking into account the interfaces that the A122 has with APTRs (A2, A13, A1089), M25 and the local road network. d. Operation of the road tunnel Further information is provided in 9.17 Issue Specific Hearing 1 Action number 3 Design and operational distinction between an all purpose trunk road (APTR) and smart motorway [**REP1-196**]
		Comments expressing concern that the Project has not considered alternative modes of transport,	The Applicant has considered a range of options during the development of the Project to provide improved cross-river provision for walkers and cyclists. The options investigated include using the tunnel, upgrading the existing ferry, relocating the ferry, building a separate bridge or cable car, and providing a shuttle service through the tunnel. These options were not taken forward for a variety of reasons including technical feasibility, operational issues, lack of commercial viability, cost, environmental impacts, and poor safety. Latent demand for walking and cycling across the River Thames at the Project crossing point is low and therefore unlikely to unlock enough trips to make the required infrastructure for a dedicated shuttle service economically viable. Page 48 of the Project Design Report Part G: Design Evolution [**APP-514**] provides further information. In addition, Section 5.3 in Chapter 5 of the Planning Statement [**APP-495**] provides an overview of the assessment undertaken on alternative modes of transport. Details of the proposed walking, cycling and horse-riding routes by category (new, improved, realigned) are set out in Transport Assessment Appendix A: Public Rights of Way [**APP-530**]. The Applicant has sought to restore and enhance existing Public Rights of Way (PRoW) and routes for Walkers, Cyclists and Horse Riders (WCH) in the vicinity of the Project route. In some cases this includes the upgrade (e.g. widening and resurfacing) of existing WCH routes and in other cases involves a change of status of PRoW to permit use by a wider group of users (e.g. upgrading a footpath to a bridleway). Furthermore the Applicant is promoting new PRoW and WCH routes which augment or enhance the existing network or deal with historic severance in the wider network. Overall therefore the Applicant is promoting a blend of new and improved PRoW and routes for WCH. The Project would create opportunities for public transport operators to develop new local and regional bus services, by providing new connectivity between Kent, Thurrock and Essex. Identification and development of these routes is the responsibility of the relevant operators. Local buses will not have to pay the user charge for the Lower Thames

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			Crossing, reducing operating costs for operators as is set out in Section 2.2 of the Road User Charging Statement [**APP-517**]. As set out in Section 5.3 of the Planning Statement [**APP-495**], the role that other transport modes, including rail, might play in addressing congestion at the Dartford Crossing has been considered from the outset. The provision of a new rail freight crossing of the River Thames, or any other rail freight improvements, as an alternative to the Lower Thames Crossing is not a viable or realistic alternative to the Lower Thames Crossing because there are insufficient rail intermodal distribution terminals or other facilitating infrastructure to support a transfer from road to rail freight and it is unlikely this will change in significantly in the near future, as set out in paragraphs 5.3.9 and 5.3.17 of the Planning Statement [**APP-495**]. The provision of new passenger rail services crossing of the River Thames as an alternative to a Road Crossing is also not considered to be a viable or realistic alternative as set out in paragraph 5.3.16 of the Planning Statement [**APP-495**]. Further information is provided in Annex E.9 and Annex B.2 Rail Alternatives of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].
		Comments expressing concern about increased noise and vibration during the Project's construction and operation.	The Applicant has carried out an assessment of the likely significant effects of the Project on noise and vibration during construction and operation, which is set out in ES Chapter 12: Noise and Vibration [**APP-150**]. The assessment considers potential changes to noise and vibration levels at identified noise sensitive receptors due to construction activities, as well as changes to road traffic noise levels and the tunnel ventilation system noise during operation. The assessment is compliant with the methodology set out in the Design Manual for Roads and Bridges (DMRB), which references relevant guidance including the Calculation of Road Traffic Noise (CRTN) (Department of Transport and Welsh Office, 1988), and other British Standards. The noise and vibration impacts for construction and operation are also summarised in the ES Non-Technical Summary [**APP-486**]. **Human health** In terms of noise and vibration impacts on human health, ES Chapter 13: Population and Human Health [**APP-151**] notes that there would be some significant negative health outcomes from the construction of the Project, and a range of positive and negative health outcomes from operation of the Project.

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
		Comments expressing concern about potential light pollution as a result of the Project, with some respondents referring to impacts on the night sky and the landscape.	Temporary lighting during construction would be designed, positioned and directed to prevent or minimise light disturbance, as set out in Section 6.8 of ES Appendix 2.2: Code of Construction Practice, First Iteration of Environmental Management Plan [**REP1-157**]. The use of operational lighting as part of the Project would be minimised where safe to do so, and operational lighting would be '*controllable, directional and as low-level as is practicable and safe*', as stated in clauses LST.02 and LST.03 of the Design Principles [**APP-516**]. Light pollution, as a topic with the potential to affect people's health and well-being, was scoped in to the Health and Equalities Impact Assessment (HEqIA) [**APP-539**] for both construction and operational phases of the Project. Changes to the night-time environment in terms of the perception of landscape character and night-time views that are likely to result from proposed new and replacement lighting forming part of the DCO application have been assessed within ES Appendix 7.9: Schedule of Landscape Effects [**APP-384**] and ES Appendix 7.10: Schedule of Visual Effects [**APP-385**].
		Concerns about the Project's impact on the climate, and whether the proposals reflect government policy and international agreements	The Project is setting out an industry-leading position in terms of driving out carbon in the preliminary design and setting a framework to continue to reduce its carbon impact through the commitments made in the Carbon and Energy Management Plan, which is one of three documents addressing carbon reduction in the DCO Application: • Planning Statement Appendix I: Carbon Strategy and Policy Alignment [**APP-504**] states that '*the Project represents a step change in approach for a road scheme of this scale, in terms of the scope and nature of the measures which the Applicant is committing to deliver to reduce emissions during the construction and operation of the new road. Together with the policies which the Government has set out in its Decarbonising Transport Plan (2021), these measures ensure that the Project is aligned with a trajectory to net zero and that the Project's emissions would not therefore be significant, in accordance with relevant guidance.*' • Carbon and Energy Management Plan [**APP-552**]. • ES Chapter 15: Climate [**APP-153**] Additionally, a review and the Project's response to legislation, policies and plans relevant to climate is presented in ES Appendix 15.1: Climate Legislation and Policy [**APP-480**]. A second iteration of the Carbon and Energy Management Plan [**APP-552**] would be used to demonstrate the implementation of the carbon commitments secured through the DCO during the construction phase and would set out the ways in which appointed Contractors

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			would demonstrate that carbon emissions are kept within the defined limits. The Project has a commitment to implement the PAS2080 'Carbon Management in Infrastructure' standard, and each Contractor's plan would be refreshed annually to demonstrate it remains consistent with emerging best practice and aligned with their emissions pathway.
		Comments expressing concern about the Applicant's public consultations, including concerns that the information provided was misleading or lacked detail, and that consultation feedback was misrepresented or not considered.	The pre-application consultation was carried out to the required standard as evidenced in the Consultation Report, as ratified by the Planning Inspectorate in accepting the application.

REP1-382 and REP1-383 Leigh Hughes

<table>
<tr><th>Rep ID</th><th>WR Submitter</th><th>WR/Overview/Applicant's Response</th></tr>
<tr><td rowspan="2">REP1-382
REP1-383</td><td rowspan="2">Leigh Hughes</td><td>WR:
WR link: REP1-382
Summary Of Open Floor Hearing 2: REP1-383</td></tr>
<tr><td>Overview:
REP1-382 and REP1-383 raised issues on the following topics:
• Concerns that the Project is in effect a Smart Motorway
• Safety of the tunnels
• Capacity of hospitals to cope with accidents from the Project
• Response times from Orsett Fire Station to the Project
• Suitability of the Applicant's traffic modelling
• Concerns over flooding, including the potential for the Mardyke viaduct and other Project structures to increase the potential or scale of flooding, leading to impacts on the Interested Party's property.
• Concern that the safety of HGVs using the Mardyke viaduct may be affected by bad weather, including high winds and fog.
• Concern over a lack of hedgerow on the B186 North Road green bridge, to the detriment of wildlife connectivity
• Concerns over the potential for 24-hour working patterns for the construction of bridge structures close to the Interested Party's property
• Mistakes in consultation maps and plans
The following table provides the Applicant's responses to those issues.
<table>
<tr><th>WR summary</th><th>Response</th></tr>
<tr><td>Concerns that the Project is in effect a Smart Motorway</td><td>Safety is National Highways' highest priority. The design of the A122 seeks to further enhance safety, beyond that of a conventional All Purpose Trunk Roads (APTRs), through addition of technology services and features to better support the road user. APTRs have been in existence for many years and are used regularly by the public. Like other ATPRs, the A122 will typically have 1m nearside and offside hard strips and no hard shoulder.</td></tr>
</table>
</td></tr>
</table>

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			Therefore, the appropriate design and operation for the A122 is that of an APTR with enhanced safety and operational features. The key design philosophy is that A122 is an APTR, not a motorway or ALR motorway. The operation of APTRs without hard shoulders is not a recent development. There are many hundreds of miles of APTR, without hard shoulder, currently in operation across the country which are used by millions of road users each year. Whilst there are many facets involved in determining the design and operating regime for a road, key factors for the A122 are as follows: a. User safety. b. The A122 is new build and not a conversion of an existing road. c. Purpose of route and route consistency, taking into account the interfaces that the A122 has with APTRs (A2, A13, A1089), M25 and the local road network. d. Operation of the road tunnel Further information is provided in 9.17 Issue Specific Hearing 1 Action number 3 Design and operational distinction between an all purpose trunk road (APTR) and smart motorway [**REP1-196**]
		Safety of the tunnels	Both Crossings will be managed by National Highways, in accordance with standard National Highways Incident Management Processes (DMRB GM703), in order to provide a co-ordinated response to incidents at either Crossing, including: • Managed through the Regional Operations Centre • Traffic Officer resources for both crossings • National management escalation structure for dealing with the response to different levels of incident. • Communications resources for advanced warnings (Message signs, social media, press, radio etc.) National Highways works in partnership with key responders (Association of Ambulance Chief Executives, National Fire Chiefs Council and National Police Chiefs' Council) under the CLEAR agreement to minimise the impact of incidents on road users and the economy through an integrated, coordinated approach. The agreement sets out roles and responsibilities of the key organisations involved in traffic incident management on the strategic road network. The majority of incidents would be managed at a day-to-day operational level and would likely have a relatively minor effect on road users diverting between the Crossings.

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			More complex incidents would be escalated to a Regional Response to enable strategic involvement for the planning of resources and resolution, press coverage and wider strategic signing. In most incident cases, even at Regional Response level, Dartford would continue to operate at ~50% capacity, meaning the remaining ~50% would need to be managed: • Traffic in the immediate vicinity of the Dartford Crossing would likely continue to use the Dartford Crossing. • Traffic on strategic routes towards the Crossing would be warned of the delays through (all currently existing): – Variable message signs (including journey time information and differential route information at strategic points) – Sat Nav / in car systems – Traffic England website (incident descriptions, delay information and resolution estimates) – Press, radio etc. – Social media This will allow road users with journeys already underway to make early and informed decisions around the best choice of route for example: – Remain enroute to the Dartford Crossing – Divert to Lower Thames Crossing through an appropriate route (as early as possible). – Use alternative sections of the SRN if appropriate (e.g. M25) – The use of media streams to alert people to the potential delays would also likely have the effect of temporarily reducing the number of people attempting to make a crossing, therefore temporarily reducing the overall demand. (as demonstrated by the protests on the QEII Bridge in 2022).
		Capacity of hospitals to cope with accidents from the Project	Healthcare has been considered as a community asset, and both baseline data and the assessment has been provided in Environmental Statement Chapter 13: Population and Human Health [**APP-151**]. The health outcome for affected communities / sensitive populations as a result of changes in road safety during operation of the Project are assessed as being neutral, as set out in Section 7.7 of the Health and Equalities Impact Assessment [**APP-539**].

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			Information on road safety, including the modelling of accidents on the Project and the measures taken to reduce their likelihood, is provided in Chapter 9 of the Transport Assessment [**APP-529**]. Over the study area as a whole there is predicted to be a decrease in the number of accidents per vehicle kilometre driven, but due to the increase in the total number of vehicle kilometres driven as a result of the Project there is predicted to be an overall increase in the number of accidents. The design of the Project has been developed in close coordination with the Emergency Services. The Applicant has made a commitment in the Code of Construction Practice and Register of Environmental Actions and Commitments [**REP1-157**] to liaise with the emergency services in the preparation and submission for approval of the Environmental Management Plan and Traffic Management Plan for Construction. For detailed design, consultation with the emergency services would be through the provisions of the DMRB. Further information on the Applicant's engagement with the emergency services with respect to the Project is set out in the Statement of Common Ground between National Highways and the Emergency Services and Safety Partnership Steering Group [**REP1-200**]. For the operational phase, it is a requirement of the Design Manual for Roads and Bridges that emergency services shall be consulted through a Tunnel Design and Safety Consultation Group (TDSCG) on such issues of emergency response and evacuation, including formation of the Emergency Response Plans. The Applicant has already consulted with the emergency services in relation to incident access and response times through the Project route and where appropriate and following this consultation, the Project has added access and turnaround points to improve response times, e.g., turnaround facilities at the B186. The Applicant also liaises with NHS Integrated Care Boards with respect to the anticipated effects of the operation of the Project in relation to their service.
		Response times from Orsett Fire Station to the Project	The Applicant has engaged with emergency services providers, including Essex County Fire & Rescue, to enhance accessibility to all parts of the Project. This has resulted in a number of design changes. An emergency link has been provided within the A13 junction that provides emergency access to all parts of the Project from Orsett Fire Station. A further emergency access route is provided where Brentwood Road crosses the Project south of the Orsett Cock junction. This emergency access route would provide access to both north and southbound carriageways. In addition, emergency access points would be provided where the B186 North Road crosses the Project. These emergency access

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			points would provide access to both carriageways for vehicles travelling from Grays Fire Station. Safety is the Applicant's highest priority. The new crossing will be designed and built to the standards recommended today, but the Applicant will continue to adapt its plans to incorporate advances in safety design and technology that will come forward in the years ahead to minimise the number and severity of incidents. When incidents do occur, the design includes technology to quickly detect and respond, supplemented by operational resources available attend incidents, minimising the duration and impact. In the event of an incident occurring, the National Highways Regional Operations Centre will liaise with the various emergency services, Traffic Officers, National Highways network maintainers and other network authorities to ensure that any delays are kept to a minimum; that incidents are cleared within the Applicant's response time; and any diversions are managed in line with agreements with other network authorities. In addition, the Applicant will use multiple communications channels to advise motorists of traffic conditions, so that that they can adjust their journeys to suit. Further information is provided in the Project Design Report [**APP-506 to APP-515**] and the Design Principles [**APP-516**].
		Suitability of the Applicant's traffic modelling	The Economic Appraisal Report (EAR) within Appendix D: Economic Appraisal Package of the Combined Modelling and Appraisal Report (ComMA) [**APP-526**] describes the methodologies used to appraise the economic, environmental, social benefits, disbenefits, revenues and costs of the Project and presents the appraisal results. The appraisal informs the Project's VfM assessment. The appraisal, which uses outputs from the Lower Thames Area Model (LTAM) transport model, aligns with the principles in HM Treasury Green Book (HM Treasury, 2022) and is based on the methodologies in the DfT's Transport Analysis Guidance (TAG).
		Concerns over flooding, including the potential for the Mardyke viaduct and other Project structures to increase the potential or scale of flooding, leading to impacts on the Interested Party's property.	The Project proposals have been designed in accordance with the National Policy Statement for National Networks and the relevant provisions of the National Planning Policy Framework. This includes Government policy on development and flood risk. The Project has been subject to a detailed Flood Risk Assessment (FRA) that has demonstrated that the Project would not increase flood risk, with the exception of some predesignated areas known as Compensatory Flood Storage Areas. In these areas, the land would be lowered to accommodate any flood water displaced by the Project, including in the Mardyke floodplain associated with construction of the viaduct and approach embankments, as detailed in Part 4 of ES Appendix 14.6: Flood Risk

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			Assessment [**APP-463**]. The FRA and modelling informing it has been reviewed and approved by the Environment Agency. The Applicant has engaged directly with the Interested Party regarding their flooding concerns.
		Concern that the safety of HGVs using the Mardyke viaduct may be affected by bad weather, including high winds and fog.	The local ground level at the Mardyke Viaduct site and the Dartford Crossing are both approximately 0-5m Above Ordnance Datum (AOD). However, the bridge deck level for the Mardyke viaduct would be 7m above adjacent ground level, whereas the Dartford Crossing bridge deck level is in excess of 60m above adjacent ground level. Wind speeds experienced at a height of +60m above local ground level will be much higher than those at +7m (regardless of AOD) since the roughness of local terrain acts to significantly reduce wind speeds close to ground level through the boundary layer effect. For this reason, local wind speeds experienced by drivers crossing the Mardyke viaduct would be significantly lower than those experienced by drivers crossing the Dartford Crossing for the same weather event and therefore the provision of wind barriers are not considered to be necessary. The Applicant would utilise environmental sensor stations located along the route to monitor weather conditions. These enable the setting of electronic signs to advise motorists of prevailing conditions.
		Concern over a lack of hedgerow on the B186 North Road green bridge, to the detriment of wildlife connectivity	The proposed North Road green bridge and hedgerow planting along and leading up to North Road and Muckingford Road green bridges have been designed to accommodate terrestrial mammals and bats. North Road green bridge has been designed with 7m green verges to the east and west of a two-lane road, as well as a walking, cycling and horse-riding route including hedgerows that link to wider hedgerow and habitat provision. Further information is provided in ES Chapter 8: Terrestrial Biodiversity [**APP-146**], and sheets 5 and 6 of ES Figure 2.4: Environmental Masterplan Section 12 (8 of 10) [**APP-166**].
		Concerns over the potential for 24-hour working patterns for the construction of bridge structures close to the Interested Party's property	The majority of the works associated with the construction of the realigned North Road and bridge will be carried out during daytime working. Provisions of limited night-time road closures and two 48hr weekend closures have been made to facilitate the completion of tie-in road works and bridge construction. Table 1.1 of ES Appendix 2.1: Construction Supporting Information [**APP-335**] sets out additional construction information on the highways works that require extended working hours. The requirement for night-time working in this area is needed to reduce traffic impacts along North Road. Advance notice for road closures and night-time working would be given. Construction working hours and 24-hour construction working locations are detailed on pages 43-52 of ES Appendix 2.2: Code of Construction Practice, First Iteration of

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			Environmental Management Plan (CoCP) [**REP1-157**], which provides a framework to manage construction and operational activities. Its objectives are to ensure that environmental mitigation commitments are met and that necessary consents and licenses are obtained. It is acknowledged that the impacts on communities from measures required to ensure the safe delivery of the Project should be kept to a minimum as much as is reasonably practicable. Table 2.3 of the outline Traffic Management Plan for Construction (oTMPfC) [**REP1-174**] sets out the minimum requirements and measures the Traffic Management Plan (TMP) would address to mitigate or otherwise minimise impacts, including maintaining access and egress to residents. These measures would be further developed in discussions undertaken with the relevant authorities and would be set out in the TMP which will be developed in accordance with the oTMPfC [**REP1-174**]. The oTMPfC has been produced to provide an overview of the approach that will be followed when undertaking temporary traffic management for the safe construction of the Lower Thames Crossing.
		Reported mistakes in consultation maps and plans	The pre-application consultation was carried out to the required standard as evidenced in the Consultation Report, as ratified by the Planning Inspectorate in accepting the application.

REP1-384 Linda Allen

<table>
<tr><th>Rep ID</th><th>WR Submitter</th><th>WR/Overview/Applicant's Response</th></tr>
<tr><td rowspan="2">REP1-384</td><td rowspan="2">Linda Allen</td><td>WR:
WR link: REP1-384</td></tr>
<tr><td>Overview:
REP1-384 raised issues on the following topics:
The need for the Project, including its location and efficacy
Climate compatibility
Impacts on human health
Noise impacts
Air quality impacts
Impacts on the environment, including ancient woodland and wildlife habitats
Agricultural land
Information available at the time of DCO Application
Nitrogen deposition and the availability of information on compensation sites
Changes to horse riding provision
The following table provides the Applicant's responses to those issues.<table><tr><th>WR summary</th><th>Response</th></tr><tr><td>The need for the Project, including its location and efficacy</td><td>The Scheme Objectives are recorded in the Need for the Project [APP-494]. They were agreed between the Applicant and the Department for Transport, and include the requirement to relieve the congested Dartford Crossing and its approach roads.
Table 4.2 of the Planning Statement [APP-495] provides a summary of how the key benefits of the Project support the Scheme Objectives. The benefits of the Project are such that it is the right solution to the issues identified and the Project would support the Scheme Objectives.</td></tr></table></td></tr>
</table>

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			In Annex A of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**], Section A.2 explains how the reduction of traffic at the Dartford Crossing is linked to the benefits of the Project: '*To understand the performance of the Dartford Crossing, in scenarios with and without the proposed A122 Lower Thames Crossing (ie the Do Minimum and Do Something scenarios) it is the journey time benefits and the journey time reliability benefits that provide the means to understand the benefits of the project, and to assess whether the proposed new road would continue to provide relief to the Dartford Crossing into the future.*' The Project has undergone a thorough assessment of route alternatives, which is presented in Chapter 5 of the Planning Statement.[**APP-495**]. Section 5.4 sets out the key stages that led to the selection of the Preferred Route Announcement (PRA) by DfT, and subsequent reappraisal by the Project. With regard to Location A (Additional Capacity at the Existing Dartford Crossing), the Applicant examined options for an additional tunnel or an additional bridge at this location. Table 5.10 sets out how these options were developed together as Route 1. The Applicant has regularly revisited the options selection process prior to the submission of the Application. The reassessment confirmed that: Route 1 could not be developed as a free-flowing 70mph solution, as the crossings and approaches would be restricted to 50mph. As traffic would still be funnelled through the existing M25/A282 corridor between junction 2 and junction 30, it would not provide resilience on the network. Despite lower costs than the preferred route, it delivered lower value for money as the economic benefits were substantially smaller. The additional traffic through the existing corridor would exacerbate existing air quality problems and lead to an overall noise disbenefit.
		Climate compatibility	The Project is setting out an industry-leading position in terms of driving out carbon in the preliminary design and setting a framework to continue to reduce its carbon impact through the commitments made in the Carbon and Energy Management Plan, which is one of three documents addressing carbon reduction in the DCO Application: • Planning Statement Appendix I: Carbon Strategy and Policy Alignment [**APP-504**] states that '*the Project represents a step change in approach for a road scheme of this scale, in terms of the scope and nature of the measures which the Applicant is committing to deliver to reduce emissions during the construction and operation of the*

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			new road. Together with the policies which the Government has set out in its Decarbonising Transport Plan (2021), these measures ensure that the Project is aligned with a trajectory to net zero and that the Project's emissions would not therefore be significant, in accordance with relevant guidance.' • Carbon and Energy Management Plan [**APP-552**]. • ES Chapter 15: Climate [**APP-153**] Additionally, a review and the Project's response to legislation, policies and plans relevant to climate is presented in ES Appendix 15.1: Climate Legislation and Policy [**APP-480**]. A second iteration of the Carbon and Energy Management Plan [**APP-552**] would be used to demonstrate the implementation of the carbon commitments secured through the DCO during the construction phase and would set out the ways in which appointed Contractors would demonstrate that carbon emissions are kept within the defined limits. The Project has a commitment to implement the PAS2080 'Carbon Management in Infrastructure' standard, and each Contractor's plan would be refreshed annually to demonstrate it remains consistent with emerging best practice and aligned with their emissions pathway.
		Impacts on human health, noise and air quality	ES Chapter 13: Population and Human Health [**APP-151**] describes how local communities could be affected by the construction and operation of the Project and explains the ways in which these impacts would be reduced. As well as the assessments documented in ES Chapter 13, the Applicant has carried out a Health and Equalities Impact Assessment (HEqIA) [**APP-539**], which considers the Project's impacts during construction and operation on the health and wellbeing of local communities covering a number of topics including severance, accessibility, work and training, access to open spaces and mental health and wellbeing. The HEqIA also considers the impacts on those protected by equalities legislation, such as children, older people, disabled people, and those with pre-existing health conditions, accounting for the impacts during construction and operation phases. The ES also includes assessments of the Project's impacts on specific aspects of the environment, including ES Chapter 5: Air Quality [**APP-143**] and ES Chapter 12: Noise and Vibration [**APP-150**]. The range of controls and mitigation measures that would be used to limit or avoid the Project's impacts on during construction are secured through their inclusion in the REAC, which forms part of ES Appendix 2.2: Code of Construction Practice [**REP1-157**].

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
		Impacts on the environment, including ancient woodland and wildlife habitats	The effects of the Project on Terrestrial Biodiversity have been assessed within Environmental Statement (ES) Chapter 8: Terrestrial Biodiversity [**APP-146**] including assessments of designated areas, such as Sites of Special Scientific Interest (SSSIs), and ancient woodlands and veteran trees. It is explained in Section 8.3 of ES Chapter 8 that the assessment has regard to both direct and indirect impacts, including severance or fragmentation of habitats or wildlife corridors. ES Chapter 8 describes the magnitude of the impacts, and the measures proposed to avoid, reduce, and compensate for the effects on sensitive ecological receptors, including ancient woodland and veteran trees.
		Impacts on agricultural land	Environmental Statement Chapter 10: Geology and Soils [APP-148] presents an assessment of likely significant effects on soil resources and BMV land. ES Appendix 10.4: Agricultural Land Classification Factual Report [**APP-425**] presents the outputs of the survey and has informed the baseline of ES Chapter 10. The Applicant has taken reasonable and practicable steps to minimise and mitigate for the likely significant effects. The design has been optimised to minimise the land take required to construct and operate the Project. The route optioneering phase and design development considered the presence of higher-quality agricultural land alongside other environmental and design constraints. Where agricultural land cannot be avoided, soil management measures to minimise the adverse effects of soil disturbance and handling during the construction phase are described in ES Chapter 10: Geology and Soils [**APP-148**] and secured through their inclusion in the REAC, which forms part of the Code of Construction Practice [**REP1-157**].
		Information available at the time of DCO Application	The Application for Development Consent made by the Project is made up of several hundred individual documents, comprising reports, maps and drawings, organised within seven volumes. The purpose and contents of these seven volumes are described in the Introduction to the Application [**APP-003**], with an accompanying Navigation Document [**AS-002**] listing each document and its Examination Library Reference Number. The Application Documents were prepared in accordance with all relevant requirements and guidance, making use of the Applicant's extensive experience of preparing DCO applications.
		Nitrogen deposition and the availability of information on compensation sites	The DCO application provides 245ha of compensatory habitat, with details of the sites and how they were selected provided in the Environmental Statement (ES) Appendix 5.6: Project Air Quality Action Plan (PAQAP) [**APP-350**]. Nitrogen deposition compensation

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			sites were selected using a site selection methodology developed in partnership with stakeholders including Natural England as explained in the PAQAP [**APP-350**]. Further information on the extent of the nitrogen deposition compensation is provided in Annex F of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**]
		Changes to horse riding provision	Details of the proposed walking, cycling and horse-riding routes by category (new, improved, realigned) are set out in Transport Assessment Appendix A: Public Rights of Way [**APP-530**]. The Applicant has sought to restore and enhance existing Public Rights of Way (PRoW) and routes for Walkers, Cyclists and Horse Riders (WCH) in the vicinity of the Project route. In some cases this includes the upgrade (e.g. widening and resurfacing) of existing WCH routes and in other cases involves a change of status of PRoW to permit use by a wider group of users (e.g. upgrading a footpath to a bridleway). Furthermore the Applicant is promoting new PRoW and WCH routes which augment or enhance the existing network or deal with historic severance in the wider network. Overall therefore the Applicant is promoting a blend of new and improved PRoW and routes for WCH. Further information is provided in Annex E.9 of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].

REP1-388 Mr John Thacker

<table>
<tr><th>Rep ID</th><th>WR Submitter</th><th>WR/Overview/Applicant's Response</th></tr>
<tr><td rowspan="2">REP1-388</td><td rowspan="2">Mr John Thacker</td><td>WR:
WR link: REP1-388</td></tr>
<tr><td>Overview:
REP1-388 raised issues on the following topics:
• The need for the Project, including concerns over its cost and its ability to meet the Scheme Objectives
• Congestion on the Strategic Road Network
• Stanford le Hope detour
• Lack of provision for cross-river active travel
• Noise impacts
• Air quality impacts
• Green Belt impacts
• Climate compatibility
• Lack of employment opportunities
• Public health concerns
• Modal alternatives
The following table provides the Applicant's responses to those issues.
<table>
<tr><th>WR summary</th><th>Response</th></tr>
<tr><td>The need for the Project, including concerns over its cost and its ability to meet the Scheme Objectives</td><td>The Scheme Objectives are recorded in the Need for the Project [APP-494]. They were agreed between the Applicant and the Department for Transport, and include the requirement to relieve the congested Dartford Crossing and its approach roads.
Table 4.2 of the Planning Statement [APP-495] provides a summary of how the key benefits of the Project support the Scheme Objectives. The benefits of the Project are such that it is the right solution to the issues identified and the Project would support the Scheme Objectives.</td></tr>
</table></td></tr>
</table>

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			In Annex A of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**], Section A.2 explains how the reduction of traffic at the Dartford Crossing is linked to the benefits of the Project: '*To understand the performance of the Dartford Crossing, in scenarios with and without the proposed A122 Lower Thames Crossing (ie the Do Minimum and Do Something scenarios) it is the journey time benefits and the journey time reliability benefits that provide the means to understand the benefits of the project, and to assess whether the proposed new road would continue to provide relief to the Dartford Crossing into the future.*' Achieving value for money is one of the Scheme Objectives and a Value for Money (VfM) assessment has been carried out. As detailed in the Need for the Project [**APP-494**] it represents positive value for money as the substantial benefits of the Project outweigh the costs. The Economic Appraisal Report (EAR) within Appendix D: Economic Appraisal Package of the Combined Modelling and Appraisal Report (ComMA) [**APP-526**] describes the methodologies used to appraise the economic, environmental, social benefits, disbenefits, revenues and costs of the Project and presents the appraisal results. The appraisal informs the Project's VfM assessment. The appraisal, which uses outputs from the Lower Thames Area Model (LTAM) transport model, aligns with the principles in HM Treasury Green Book (HM Treasury, 2022) and is based on the methodologies in the DfT's Transport Analysis Guidance (TAG).
		Congestion on the Strategic Road Network	Chapter 7 of the Transport Assessment [**APP-529**] covers the impact of the Project once fully operational on the strategic and local road network, as well as public transport services and Public Rights of Way. The outline Traffic Management Plan for Construction [**REP1-174**] has been produced to provide an overview of the approach that will be followed when undertaking temporary traffic management for the safe construction of the Project. The DCO application includes a Wider Network Impacts Management and Monitoring Plan which sets out the Applicant's approach on the forecast wider network impacts of the Project [**APP-545**]. The creation of new capacity on the road network will lead to changes in the way people travel. Some people will choose to make different journeys because shorter or less congested routes become available, and some people who would not previously have travelled will choose to make new journeys because the faster or shorter journey

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			becomes more affordable. As a result, there will be changes in the lengths of journeys made, and in the total number of journeys made. The net increase in kilometres driven is highest in the PM peak hour, with an overall increase of 1.1% in 2030 and 1.23% in 2045. Further information is provided in section A.3 New and longer trips in Annex A of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].
		Stanford le Hope detour	The A13/A1089/A122 Lower Thames Crossing junction design provides a direct link between the Orsett Cock junction and the A1089 southbound, which improves connectivity from the A122 northbound and southbound to the A1089. Westbound traffic would be able to access the A1089 from the A13 via the Orsett Cock junction without the need to use local roads, such as Brentwood Road and the A1013 Stanford Road. The Applicant's traffic modelling shows that there would be a very low number of vehicles (which originate from the A128 north of the Orsett Cock junction and wish to use the Project) U-turning at the Manorway junction as a result of the layout of the proposed A13/A1089/A122 Lower Thames Crossing junction. The performance of the junction within both the strategic modelling and localised traffic modelling for the Manorway junction include this traffic. For more information about how the Applicant has carried out traffic modelling, see the Combined Modelling and Appraisal Report [**APP-518**], including Appendices A, B and C [**APP-519** to **APP-523**]. A summary of the methodology is included in Traffic Forecasts Non-Technical Summary [**APP-528**]. The Transport Assessment [**APP-529**] presents the forecast impacts of the Project on the performance of the transport system. Further information on the Applicant's localised modelling work is set out in the Localised Traffic Modelling document and Appendices A, B, C and D [**REP1-187** to **REP1-190**].
		Lack of provision for cross-river active travel	The Applicant has considered a range of options during the development of the Project to provide improved cross-river provision for walkers and cyclists. The options investigated include using the tunnel, upgrading the existing ferry, relocating the ferry, building a separate bridge or cable car, and providing a shuttle service through the tunnel. These options were not taken forward for a variety of reasons including technical feasibility, operational issues, lack of commercial viability, cost, environmental impacts, and poor safety. Latent demand for walking and cycling across the River Thames at the Project crossing point is low and therefore unlikely to unlock enough trips to make the required infrastructure for a dedicated shuttle service economically viable. Page 48 of the Project Design Report Part G: Design Evolution [**APP-514**] provides further information.

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			In addition, Section 5.3 in Chapter 5 of the Planning Statement [**APP-495**] provides an overview of the assessment undertaken on alternative modes of transport. Further information is provided in Annex E.9 of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].
		Noise impacts	The Applicant has assessed the potential noise impacts from both the operation and construction of the Project and proposes mitigation measures to manage this impact. This is reported in ES Chapter 12 [**APP-150**] and the control measures are in detailed in the CoCP and REAC [**REP1-157**].
		Air quality impacts	The Applicant has assessed the air quality impacts of both the operation and construction of the Project in ES Chapter 5 [**APP-143**], and proposed measures to manage these impacts where appropriate are outlined in the CoCP and REAC [**REP1-157**].
		Green Belt impacts	The Applicant has provided a detailed assessment of the Project and its impact on the Green Belt in Planning Statement Appendix E [**APP-500**]. This demonstrates that the Project is compliant with national policy which is permissive of 'inappropriate development' in the Green Belt in 'very special circumstances'.
		Climate compatibility	The Project is setting out an industry-leading position in terms of driving out carbon in the preliminary design and setting a framework to continue to reduce its carbon impact through the commitments made in the Carbon and Energy Management Plan, which is one of three documents addressing carbon reduction in the DCO application: • Planning Statement Appendix I: Carbon Strategy and Policy Alignment [**APP-504**] states that '*the Project represents a step change in approach for a road scheme of this scale, in terms of the scope and nature of the measures which the Applicant is committing to deliver to reduce emissions during the construction and operation of the new road. Together with the policies which the Government has set out in its Decarbonising Transport Plan (2021), these measures ensure that the Project is aligned with a trajectory to net zero and that the Project's emissions would not therefore be significant, in accordance with relevant guidance.*' • Carbon and Energy Management Plan [**APP-552**]. • ES Chapter 15: Climate [**APP-153**] Additionally, a review and the Project's response to legislation, policies and plans relevant to climate is presented in ES Appendix 15.1: Climate Legislation and Policy [**APP-480**].

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			A second iteration of the Carbon and Energy Management Plan [**APP-552**] would be used to demonstrate the implementation of the carbon commitments secured through the DCO during the construction phase and would set out the ways in which appointed Contractors would demonstrate that carbon emissions are kept within the defined limits. The Project has a commitment to implement the PAS2080 'Carbon Management in Infrastructure' standard, and each Contractor's plan would be refreshed annually to demonstrate it remains consistent with emerging best practice and aligned with their emissions pathway.
		Lack of employment opportunities	The Applicant is working with stakeholders and intends to provide opportunities for local people to work on the construction and operation of the route and help local businesses form part of the supply chain that would build and operate the route. Steps being taken to deliver economic benefits for the local community include new skills and training for local residents during the construction phase, work placements and careers advice for local students, a pre-employment support programme for long-term unemployed, and support for local business leaders to bid for this and the future pipeline of investment in the region. See Section 7.10 and Table 7.38 of the Health and Equalities Impact Assessment (HEqIA) [**APP-539**].
		Public health concerns	A Health and Equalities Impact Assessment (HEqIA) [**APP-539**] has been prepared, which considers the health impacts on local people and communities, including those protected by equality legislation, such as children and older people, during the construction and operation of the Project.ES Chapter 13: Population and Human Health [**APP-151**] describes how local communities could be affected by the construction and operation of the Project and explains the ways in which these impacts would be reduced.
		Modal alternatives to the Project	The Project would create opportunities for public transport operators to develop new local and regional bus services, by providing new connectivity between Kent, Thurrock and Essex. Identification and development of these routes is the responsibility of the relevant operators. Local buses will not have to pay the user charge for the Lower Thames Crossing, reducing operating costs for operators as is set out in Section 2.2 of the Road User Charging Statement [**APP-517**]. Further information is provided in Annex E.9 of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**]. As set out in Section 5.3 of the Planning Statement [**APP-495**], the role that other transport modes, including rail, might play in addressing congestion at the Dartford Crossing has been considered from the outset.

Rep ID	WR Submitter	WR/Overview/Applicant's Response		
			The provision of a new rail freight crossing of the River Thames, or any other rail freight improvements, as an alternative to the Lower Thames Crossing is not a viable or realistic alternative to the Lower Thames Crossing because there are insufficient rail intermodal distribution terminals or other facilitating infrastructure to support a transfer from road to rail freight and it is unlikely this will change in significantly in the near future, as set out in paragraphs 5.3.9 and 5.3.17 of the Planning Statement [**APP-495**]. The provision of new passenger rail services crossing of the River Thames as an alternative to a Road Crossing is also not considered to be a viable or realistic alternative as set out in paragraph 5.3.16 of the Planning Statement [**APP-495**]. Further information is provided in Annex B.2 Rail Alternatives of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].	

REP1-391 Mrs Jackie Thacker

<table>
<tr><th>Rep ID</th><th>WR Submitter</th><th>WR/Overview/Applicant's Response</th></tr>
<tr><td rowspan="2">REP1-391</td><td rowspan="2">Mrs Jackie Thacker</td><td>WR:
WR link: REP1-391</td></tr>
<tr><td>
Overview:
REP1-391 raised issues on the following topics:

The need for the Project, including its cost and ability to solve problems at Dartford
Greenbelt loss
Wildlife habitat loss
Construction duration and working hours
Noise pollution
Air pollution
Impacts on landowners, including concerns over discretionary and compulsory purchase orders
Stanford le Hope detour
Lack of provision for cross-river active travel
Modal alternatives/provision, including rail
Preference for other route alternatives
Climate compatibility

The following table provides the Applicant's responses to those issues.
<table>
<tr><th>WR summary</th><th>Response</th></tr>
<tr><td>The need for the Project, including its ability to solve problems at Dartford and its cost</td><td>The Scheme Objectives are recorded in the Need for the Project [APP-494]. They were agreed between the Applicant and the Department for Transport, and include the requirement to relieve the congested Dartford Crossing and its approach roads.
Table 4.2 of the Planning Statement [APP-495] provides a summary of how the key benefits of the Project support the Scheme Objectives. The benefits of the Project are</td></tr>
</table>
</td></tr>
</table>

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			such that it is the right solution to the issues identified and the Project would support the Scheme Objectives. In Annex A of 9.10 Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**], Section A.2 explains how the reduction of traffic at the Dartford Crossing is linked to the benefits of the Project: '*To understand the performance of the Dartford Crossing, in scenarios with and without the proposed A122 Lower Thames Crossing (ie the Do Minimum and Do Something scenarios) it is the journey time benefits and the journey time reliability benefits that provide the means to understand the benefits of the project, and to assess whether the proposed new road would continue to provide relief to the Dartford Crossing into the future.*' Achieving value for money is one of the Scheme Objectives and a Value for Money (VfM) assessment has been carried out. As detailed in the Need for the Project [**APP-494**] it represents positive value for money as the substantial benefits of the Project outweigh the costs. The Economic Appraisal Report (EAR) within Appendix D: Economic Appraisal Package of the Combined Modelling and Appraisal Report (ComMA) [**APP-526**] describes the methodologies used to appraise the economic, environmental, social benefits, disbenefits, revenues and costs of the Project and presents the appraisal results. The appraisal informs the Project's VfM assessment. The appraisal, which uses outputs from the Lower Thames Area Model (LTAM) transport model, aligns with the principles in HM Treasury Green Book (HM Treasury, 2022) and is based on the methodologies in the DfT's Transport Analysis Guidance (TAG).
		Greenbelt loss	The Applicant has provided a detailed assessment of the Project and its impact on the Green Belt in Planning Statement Appendix E [**APP-500**]. This demonstrates that the Project is compliant with national policy which is permissive of 'inappropriate development' in the Green Belt in 'very special circumstances'.
		Wildlife habitat loss	The effects of the Project on Terrestrial Biodiversity have been assessed within Environmental Statement (ES) Chapter 8: Terrestrial Biodiversity [**APP-146**] including assessments of designated areas, such as Sites of Special Scientific Interest (SSSIs), and ancient woodlands and veteran trees. It is explained in Section 8.3 of ES Chapter 8 that the assessment has regard to both direct and indirect impacts, including severance or fragmentation of habitats or wildlife corridors.

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			ES Chapter 8 describes the magnitude of the impacts, and the measures proposed to avoid, reduce, and compensate for the effects on sensitive ecological receptors, including ancient woodland and veteran trees.
		Construction duration and working hours	In the main, construction would be carried out during the normal working hours as set out in the Code of Construction Practice (CoCP) [**REP1-157**]. The proposed normal working hours would be from 07:00 to 19:00 on weekdays (excluding bank holidays) and from 07:00 to 16:00 on Saturdays. Normal hours for tunnelling and other underground works would be 24/7 because operating the tunnel boring machines, casting tunnel segments, and lining the tunnel continuously are necessary to minimise the risks associated with, among other things, ground movement and water ingress.
		Noise pollution	The Applicant has assessed the potential noise impacts from both the operation and construction of the Project and proposes mitigation measures to manage this impact. This is reported in ES Chapter 12 [**APP-150**] and the control measures are in detailed in the CoCP and REAC [**REP1-157**].
		Air pollution	The Applicant has assessed the air quality impacts of both the operation and construction of the Project in ES Chapter 5 [**APP-143**], and proposed measures to manage these impacts where appropriate are outlined in the CoCP and REAC [**REP1-157**].
		Impacts on landowners, including concerns over discretionary and compulsory purchase orders	Landowners affected by the Project may be entitled to make a claim for compensation, in accordance with the Compensation Code. Each claim for compensation would be considered on its own merits, in line with the Code. Further information about the compensation offered to those affected by the Project can be found in Compulsory Purchase and Compensation: guide 2 – Compensation to Business Owners and Occupiers and guide 4 – Compensation to Residential Owners and Occupiers (Department for Levelling Up, Housing and Communities). Guide 4 includes information about compensation for when the value of someone's home has been affected by the construction or operation of the Project. The Applicant continues to engage with all affected land interests.
		Stanford le Hope detour	The A13/A1089/A122 Lower Thames Crossing junction design provides a direct link between the Orsett Cock junction and the A1089 southbound, which improves connectivity from the A122 northbound and southbound to the A1089. Westbound traffic would be able to access the A1089 from the A13 via the Orsett Cock junction without the need to use local roads, such as Brentwood Road and the A1013 Stanford Road.

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			The Applicant's traffic modelling shows that there would be a very low number of vehicles (which originate from the A128 north of the Orsett Cock junction and wish to use the Project) U-turning at the Manorway junction as a result of the layout of the proposed A13/A1089/A122 Lower Thames Crossing junction. The performance of the junction within both the strategic modelling and localised traffic modelling for the Manorway junction include this traffic. For more information about how the Applicant has carried out traffic modelling, see the Combined Modelling and Appraisal Report [**APP-518**], including Appendices A, B and C [**APP-519** to **APP-523**]. A summary of the methodology is included in Traffic Forecasts Non-Technical Summary [**APP-528**]. The Transport Assessment [**APP-529**] presents the forecast impacts of the Project on the performance of the transport system. Further information on the Applicant's localised modelling work is set out in the Localised Traffic Modelling document and Appendices A, B, C and D [**REP1-187** to **REP1-190**].
		Lack of provision for cross-river active travel	The Applicant has considered reasonable alternatives to the Project, detailed in ES Chapter 3: Assessment of Reasonable Alternatives [**APP-141**]. The Applicant considered walker, cyclist, and horse rider road-based and ferry-based public transport options. The conclusion is that these modes would not provide an alternative to a road crossing because they would not provide adequate capacity. The Applicant has considered various options during the development of the Project to provide improved river crossings for walkers and cyclists. The river crossing options investigated were not taken forward for various reasons including lack of technical feasibility, operational issues, lack of commercial viability, cost, environmental impacts and impacts on safety. A walking and cycling shuttle is not considered viable due to low latent demand and uncompetitive journey times. For more information about the proposed walkers, cyclists, and horse riders (WCH) routes, see the Project Design Report Part E: Design for Walkers, Cyclists and Horse Riders [**APP-512**].
		Modal alternatives/provision, including rail	As set out in Section 5.3 of the Planning Statement [**APP-495**], the role that other transport modes might play in addressing congestion at the Dartford Crossing has been considered from the outset. The Project would create opportunities for public transport operators to develop new local and regional bus services, by providing new connectivity between Kent, Thurrock and Essex. Identification and development of these routes is the responsibility of the relevant operators. Local buses will not have to pay the user charge for the Lower

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			Thames Crossing, reducing operating costs for operators as is set out in Section 2.2 of the Road User Charging Statement [**APP-517**]. Further information is provided in Annex E.9 of 9.10 Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**]. The provision of a new rail freight crossing of the River Thames, or any other rail freight improvements, as an alternative to the Lower Thames Crossing is not a viable or realistic alternative to the Lower Thames Crossing because there are insufficient rail intermodal distribution terminals or other facilitating infrastructure to support a transfer from road to rail freight and it is unlikely this will change in significantly in the near future, as set out in paragraphs 5.3.9 and 5.3.17 of the Planning Statement [**APP-495**]. The provision of new passenger rail services crossing of the River Thames as an alternative to a Road Crossing is also not considered to be a viable or realistic alternative as set out in paragraph 5.3.16 of the Planning Statement [**APP-495**]. Further information is provided in Annex B.2 Rail Alternatives of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].
		Climate compatibility	The Project is setting out an industry-leading position in terms of driving out carbon in the preliminary design and setting a framework to continue to reduce its carbon impact through the commitments made in the Carbon and Energy Management Plan, which is one of three documents addressing carbon reduction in the DCO application: • Planning Statement Appendix I: Carbon Strategy and Policy Alignment [**APP-504**] states that '*the Project represents a step change in approach for a road scheme of this scale, in terms of the scope and nature of the measures which the Applicant is committing to deliver to reduce emissions during the construction and operation of the new road. Together with the policies which the Government has set out in its Decarbonising Transport Plan (2021), these measures ensure that the Project is aligned with a trajectory to net zero and that the Project's emissions would not therefore be significant, in accordance with relevant guidance.*' • Carbon and Energy Management Plan [**APP-552**] • ES Chapter 15: Climate [**APP-153**] Additionally, a review and the Project's response to legislation, policies and plans relevant to climate is presented in ES Appendix 15.1: Climate Legislation and Policy [**APP-480**].

Rep ID	WR Submitter	WR/Overview/Applicant's Response		
			A second iteration of the Carbon and Energy Management Plan [**APP-552**] would be used to demonstrate the implementation of the carbon commitments secured through the DCO during the construction phase and would set out the ways in which appointed Contractors would demonstrate that carbon emissions are kept within the defined limits. The Project has a commitment to implement the PAS2080 'Carbon Management in Infrastructure' standard, and each Contractor's plan would be refreshed annually to demonstrate it remains consistent with emerging best practice and aligned with their emissions pathway.	

REP1-392 Mrs Frances Ball

<table>
<tr><th>Rep ID</th><th>WR Submitter</th><th>WR/Overview/Applicant’s Response</th></tr>
<tr><td rowspan="2">REP1-392</td><td rowspan="2">Mrs Frances Ball</td><td>WR:
WR link: REP1-392</td></tr>
<tr><td>Overview:
REP1-392 raised issues on the following topics:
Climate
Need case /cost
Construction traffic/TM
Population and human health (general)
Design - junctions
Invest in rail/existing road network
The following table provides the Applicant’s responses to those issues.
<table>
<tr><th>WR summary</th><th>Response</th></tr>
<tr><td>Opposition to the Project considering the recommendations of the Climate Change Committee.</td><td>The Applicant awaits the UK Government's response to the recommendations set out in the Climate Change Committee’s progress report to Parliament, published on 28 June 2023 and will continue to support the Department for Transport in decarbonising the transport sector. The Applicant has set out its own pathway to supporting the Department for Transport’s decarbonisation of the surface transport sector through the publication of their 2021 plan ‘Net Zero highways: Our 2030, 2040 and 2050 plan’ (National Highways, 2021).
The Project is setting out an industry-leading position in terms of driving out carbon in the preliminary design and setting a framework to continue to reduce its carbon impact through the commitments made in the Carbon and Energy Management Plan, which is one of three documents addressing carbon reduction in the DCO application:</td></tr>
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</table>

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			Planning Statement Appendix I: Carbon Strategy and Policy Alignment [**APP-504**] states that '*the Project represents a step change in approach for a road scheme of this scale, in terms of the scope and nature of the measures which the Applicant is committing to deliver to reduce emissions during the construction and operation of the new road. Together with the policies which the Government has set out in its Decarbonising Transport Plan (2021), these measures ensure that the Project is aligned with a trajectory to net zero and that the Project's emissions would not therefore be significant, in accordance with relevant guidance.*' Carbon and Energy Management Plan [**APP-552**] ES Chapter 15: Climate [**APP-153**] Additionally, a review and the Project's response to legislation, policies and plans relevant to climate is presented in ES Appendix 15.1: Climate Legislation and Policy [**APP-480**]. A second iteration of the Carbon and Energy Management Plan [**APP-552**] would be used to demonstrate the implementation of the carbon commitments secured through the DCO during the construction phase and would set out the ways in which appointed Contractors would demonstrate that carbon emissions are kept within the defined limits. The Project has a commitment to implement the PAS2080 'Carbon Management in Infrastructure' standard, and each Contractor's plan would be refreshed annually to demonstrate it remains consistent with emerging best practice and aligned with their emissions pathway.
		Length of time to complete the project is estimated at approx. 6 years Cost could rise again substantially.	Achieving value for money is one of the Scheme Objectives and a Value for Money (VfM) assessment has been carried out. As detailed in the Need for the Project [**APP-494**] it represents positive value for money as the substantial benefits of the Project outweigh the costs. The Economic Appraisal Report (EAR) within Appendix D: Economic Appraisal Package of the Combined Modelling and Appraisal Report (ComMA) [**APP-526**] describes the methodologies used to appraise the economic, environmental, social benefits, disbenefits, revenues and costs of the Project and presents the

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			appraisal results. The appraisal informs the Project's VfM assessment. The appraisal, which uses outputs from the Lower Thames Area Model (LTAM) transport model, aligns with the principles in HM Treasury Green Book (HM Treasury, 2022) and is based on the methodologies in the DfT's Transport Analysis Guidance (TAG). The Applicant's position is that the Benefit Cost Ratio (BCR) of the Project is robust, measurable and has been undertaken in line with the DfT's Transport Analysis Guidance (TAG), as set out in the Combined Modelling and Appraisal Report [**APP-526**]. The assured costs, as presented in the application, take into account labour, material and inflation. These adequately represent the Applicant's current position in relation to these cost items. The net scheme costs were assured by the Applicant in February 2022 as stated in Table 4.4 of the Combined Modelling and Appraisal Report Appendix D [**APP-526**]. Further information is provided in Section 4.8 and Annex H of 9.10 Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**]
		Increase in congestion during construction due to construction vehicle movements and road or lane closures.	The outline Traffic Management Plan for Construction [**REP1-174**] sets out an outline framework that would be applied for the design, management and communication of construction traffic management. It includes a commitment to create a Traffic Management Forum which would enable relevant stakeholders to understand and influence elements of the Applicant's plans for using the road network during construction. The Transport Assessment [**APP-529**] presents the Project's impact on the strategic and local highway networks, road safety, and local sustainable modes of transport, including public transport. It also sets out, in Chapter 8, the impact of construction on the road network, including changes to existing traffic patterns as a result of predicted construction traffic movements and temporary traffic management measures. Measures to reduce and manage the impact of the Project's construction on the road network would be secured through the

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			Framework Construction Travel Plan [**APP-546**], the outline Materials Handling Plan [**APP-338**] and the outline Traffic Management Plan for Construction [**APP-547**] which are secured through Requirements 10 and 11 of Part 1 of Schedule 2 of the draft DCO [**REP1-042**]. These control documents require the preparation of traffic management plans for construction and construction travel plans prior to the commencement of works.
		Negative impact on society and the environment	A Health and Equalities Impact Assessment (HEqIA) [**APP-539**] has been prepared, which considers the health impacts on local people and communities, including those protected by equality legislation, such as children and older people, during the construction and operation of the Project. Minimising adverse impacts on the environment is one of the Scheme Objectives agreed between the Applicant and the Department for Transport, with the Scheme Objectives set out in Table 1.1 of the Need for the Project [**APP-494**]. The Project's proposals have been designed to provide an appropriate balance between the need to reduce environmental impacts during construction, including impacts on local people, while still allowing the Project to be built safely and efficiently. The Project has also been developed to minimise the amount of land needed for its construction while still fulfilling the Scheme Objectives. The proposals avoid unnecessary impacts on local communities, the water environment, noise and light-sensitive areas, assets of cultural value, and flora and fauna. Where adverse impacts are identified appropriate mitigation measures would be implemented to reduce the impacts on local communities and the environment. These mitigation measures have been decided upon after careful consideration of feedback from the public and key stakeholders. They are addressed in the topic-specific chapters of the ES and relevant appendices, in particular ES Appendix 2.2: Code of Construction Practice (CoCP) and the Register of Environmental Actions and Commitments (REAC), which forms part of the CoCP [**REP1-157**].

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			Mitigation measures proposed would be legally secured through requirements in Part 1 of Schedule 2 of the draft DCO [**REP1-042**].
		Complicated junctions and access routes. It seems very likely that drivers will end up on the wrong route and if heading towards the tunnel entrances by mistake there is no provision to exit the LTC before the tunnels, leading to extra mileage, journey time and two-way tunnel costs.	The Project includes junctions with the main links on the relevant section of the strategic road network and with key local roads. Links include the proposed junctions with the M2/A2, A13/A1089 and M25. These connections ensure the Scheme Objective to relieve congestion at the Dartford Crossing would be satisfied, as well as helping to support sustainable local development and regional economic growth. The choice of junctions is based on traffic modelling forecasts, feedback from engagement, environmental and community impact assessments, and cost. The detailed design for the Project would be carried out by the appointed Contractors in accordance with the Design Manual for Roads & Bridges standards published at the time of detailed design, ensuring that motorists have a safe and comfortable journey. For more information about junction designs, see the Project Design Report [**APP-506** to **APP-515**]. For more about the traffic modelling, see the Transport Forecasting Package, which is Appendix C of the Combined Modelling and Appraisal Report [**APP-522**]. Information about the Scheme Objectives can be found in the Need for the Project [**APP-494**]. The Applicant would install appropriate traffic signage to ensure the route performs safely and gives motorists advance notification of road layout and destinations. Signage would include the latest technology, with variable speed limits to manage traffic flow, and warn of incidents and lane closures. Signage would provide real-time journey information on the approaches to the Project, including information about current incidents and journey times.
		A Rail Crossing east of the Dartford Crossing, maybe as a combined project, would be of futuristic benefit and would surely be more economically viable if combined with a road tunnel.	As set out in Section 5.3 of the Planning Statement [**APP-495**], the role that other transport modes, including rail, might play in addressing congestion at the Dartford Crossing has been considered from the outset.

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			The provision of a new rail freight crossing of the River Thames, or any other rail freight improvements, as an alternative to the Lower Thames Crossing is not a viable or realistic alternative to the Lower Thames Crossing because there are insufficient rail intermodal distribution terminals or other facilitating infrastructure to support a transfer from road to rail freight and it is unlikely this will change in significantly in the near future, as set out in paragraphs 5.3.9 and 5.3.17 of the Planning Statement [**APP-495**]. The provision of new passenger rail services crossing of the River Thames, either as an alternative to a Road Crossing or as a combined road and rail crossing. is also not considered to be a viable or realistic alternative as set out in paragraph 5.3.16 of the Planning Statement [**APP-495**]. Further information is provided in Annex B.2 Rail Alternatives of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].
		Financial input is needed to bring our current roads up to scratch	Strategic development of national transport infrastructure is the responsibility of the Department for TransporT. The Government's Road Investment Strategy 2: 2020–2025, also known as RIS2, (Department for Transport, 2020a), identified delivery of the Lower Thames Crossing as one of three major commitments of RIS2 (page 74), the provision of which will allow: '… the Thames Estuary to flourish as an area in its own right and overcome historic problems of deprivation.' (see graphic on page 90 and Scheme E30 on page 100). The Scheme Objectives are recorded in the Need for the Project [**APP-494**]. They were agreed between the Applicant and the Department for Transport, and include the requirement to relieve the congested Dartford Crossing and its approach roads. Table 4.2 of the Planning Statement [**APP-495**] provides a summary of how the key benefits of the Project support the Scheme Objectives. The benefits of the Project are such that it is

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			the right solution to the issues identified and the Project would support the Scheme Objectives. Improvements to local roads are the responsibility of the relevant Local Highway Authorities, whose funding is separate from and not affected by the funding for the Project.

REP1-393 Muriel Dorothy Blake

Rep ID	WR Submitter	WR/Overview/Applicant's Response
REP1-393	Muriel Dorothy Blake	**WR:** WR link: **REP1-393**
		Overview: **REP1-393** raised issues on the following topics: • Criticism of the Applicant's assessment of Unexploded Ordnance (UXO) • Criticism of the Applicant's assessment of ground-borne noise and vibration and underwater noise from the tunnel boring machine at marine receptors • The Project's ability to solve congestion issues at Dartford • The cost of the Project • Air pollution • Public health impacts • Environmental impacts, including woodlands • The lack of provision for cross-river active travel • Impacts on agriculture • Impacts on a solar farm • Impacts on Local Plans • Impacts on emergency services • Modal alternatives • Alternative route options and upgrades at the Dartford Crossing The following table provides the Applicant's responses to those issues.

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
		WR summary	**Response**
		Criticism of the Applicant's assessment of Unexploded Ordnance (UXO)	ES Appendix 10.10: Unexplored Ordnance (UXO) Desk Study & Risk Assessment [**APP-433**] provides a detailed assessment of the Project area and was produced according to industry best practice and guidance. The Applicant has and will continue to act on its findings and recommendations, with responsibilities passed on to its appointed contractors as appropriate. The safety of residents, road users and staff working on the construction and operation of the Project is a core priority, as represented in the Scheme Objectives.
		Criticism of the Applicant's assessment of ground borne noise and vibration and underwater noise from the Tunnel Boring Machine at marine receptors	ES Appendix 9.1: Assessment of ground-borne noise and vibration, and underwater noise from the tunnel boring machine at marine receptors [**APP-420**] – conforms to industry best practice and all relevant guidance.
		The Project's ability to solve congestion issues at Dartford	The Scheme Objectives are recorded in the Need for the Project [**APP-494**]. They were agreed between the Applicant and the Department for Transport, and include the requirement to relieve the congested Dartford Crossing and its approach roads. Table 4.2 of the Planning Statement [**APP-495**] provides a summary of how the key benefits of the Project support the Scheme Objectives. The benefits of the Project are such that it is the right solution to the issues identified and the Project would support the Scheme Objectives. In Annex A of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**], Section A.2 explains how the reduction of traffic at the Dartford Crossing is linked to the benefits of the Project: '*To understand the performance of the Dartford Crossing, in scenarios with and without the proposed A122 Lower Thames Crossing (ie the Do Minimum and Do Something scenarios) it is the journey time benefits and the journey time reliability benefits that provide the means to understand the benefits of the project, and to assess whether the proposed new road would continue to provide relief to the Dartford Crossing into the future.*'

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
		The cost of the Project	Achieving value for money is one of the Scheme Objectives and a Value for Money (VfM) assessment has been carried out. As detailed in the Need for the Project [**APP-494**] it represents positive value for money as the substantial benefits of the Project outweigh the costs. The Economic Appraisal Report (EAR) within Appendix D: Economic Appraisal Package of the Combined Modelling and Appraisal Report (ComMA) [**APP-526**] describes the methodologies used to appraise the economic, environmental, social benefits, disbenefits, revenues and costs of the Project and presents the appraisal results. The appraisal informs the Project's VfM assessment. The appraisal, which uses outputs from the Lower Thames Area Model (LTAM) transport model, aligns with the principles in HM Treasury Green Book (HM Treasury, 2022) and is based on the methodologies in the DfT's Transport Analysis Guidance (TAG).
		Air pollution	Air quality across the UK is improving generally. This is also evident in Thurrock. Thurrock's most recent annual status report (Annual Status Report on Air Quality in Thurrock (Thurrock Council, 2022)) covering air quality in Thurrock in recent years, states that there is a general trend of reduction in nitrogen dioxide (NO2) concentrations, which was evident even before the COVID-19 pandemic. The Project air quality assessment is presented within ES Chapter 5: Air Quality [**APP-143**] and has considered the impact of the Project on air quality. The Project is expected to lead to a reduction in traffic flows and congestion on the M25 between junction 2 and 29, and the A2 between M25 junction 2 and the M2/A2/A122 Lower Thames Crossing junction, which would lead to an improvement in air quality. An increase in pollutant levels is predicted at receptors adjacent to the A122 Lower Thames Crossing route, but pollutants are predicted to be well below air quality objectives at receptors along this route, with the Project in operation.
		Public health impacts	The Applicant has carried out a Health and Equalities Impact Assessment (HEqIA) [**APP-539**], which considers the Project's

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			impacts during construction and operation on the health and wellbeing of local communities covering a number of topics including severance, accessibility, work and training, access to open spaces and mental health and wellbeing. The HEqIA also considers the impacts on those protected by equalities legislation, such as children, older people, disabled people, and those with pre-existing health conditions, accounting for the impacts during construction and operation phases. ES Chapter 13: Population and Human Health [**APP-151**] describes how local communities could be affected by the construction and operation of the Project and explains the ways in which these impacts would be reduced. As well as the assessments documented in the HEqIA, ES Chapter 13: Population and Human Health [**APP-151**] describes how local communities could be affected by the construction and operation of the Project and explains the ways in which these impacts would be reduced.
		Environmental impacts, including woodlands	The effects of the Project on Terrestrial Biodiversity have been assessed within Environmental Statement (ES) Chapter 8: Terrestrial Biodiversity [**APP-146**] including assessments of designated areas, such as Sites of Special Scientific Interest (SSSIs), and ancient woodlands and veteran trees. It is explained in Section 8.3 of ES Chapter 8 that the assessment has regard to both direct and indirect impacts, including severance or fragmentation of habitats or wildlife corridors. ES Chapter 8 describes the magnitude of the impacts, and the measures proposed to avoid, reduce, and compensate for the effects on sensitive ecological receptors, including ancient woodland and veteran trees.
		The lack of provision for cross-river active travel	The Applicant has considered a range of options during the development of the Project to provide improved cross-river provision for walkers and cyclists. The options investigated include using the tunnel, upgrading the existing ferry, relocating the ferry, building a separate bridge or cable car, and providing a shuttle service through the tunnel. These options were not taken forward

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			for a variety of reasons including technical feasibility, operational issues, lack of commercial viability, cost, environmental impacts, and poor safety. Latent demand for walking and cycling across the River Thames at the Project crossing point is low and therefore unlikely to unlock enough trips to make the required infrastructure for a dedicated shuttle service economically viable. Page 48 of the Project Design Report - Part G - Design Evolution [**APP-514**] provides further information. In addition, Section 5.3 in Chapter 5 of the Planning Statement [**APP-495**] provides an overview of the assessment undertaken on alternative modes of transport. Further information is provided in Annex E.9 of 9.10 Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].
		Impacts on agriculture	Environmental Statement Chapter 10: Geology and Soils [**APP-148**] presents an assessment of likely significant effects on soil resources and BMV land. ES Appendix 10.4: Agricultural Land Classification Factual Report [**APP-425**] presents the outputs of the survey and has informed the baseline of ES Chapter 10. The Applicant has taken reasonable and practicable steps to minimise and mitigate for the likely significant effects. The design has been optimised to minimise the land take required to construct and operate the Project. The route optioneering phase and design development considered the presence of higher-quality agricultural land alongside other environmental and design constraints. Where agricultural land cannot be avoided, soil management measures to minimise the adverse effects of soil disturbance and handling during the construction phase are described in ES Chapter 10: Geology and Soils [**APP-148**] and secured through their inclusion in the REAC, which forms part of the Code of Construction Practice [**REP1-157**].
		Impacts on a solar farm	A representation has been received that relates to the Ockendon Solar Farm/Bulphan Fen Solar Farm. Pages 1,335 and 1,336 in Annex B of the Statement of Reasons [**AS-040**] set out the discussions that have taken place over the period since February

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			2019 between the Applicant and Ockendon Solar Limited (No. 687). Paragraph 13.6.110 of ES Chapter 13: Population and Human Health [**APP-151**] identifies the area of Ockendon Solar Farm as development land, and assess the impact of the Project on the solar farm. In light of the minimal interface between the Project and the solar farm, and the fact that the solar farm will be built and operating by the time the Project receives consent, the potential for the Project to prejudice the operation of the solar farm is minimal.
		Impacts on Local Plans	Chapter 7 of the Planning Statement [**APP-495**] highlights that the primary consideration for a Nationally Significant Infrastructure Project is to demonstrate accordance with National Policy as detailed in the relevant National Policy Statements. However, there are a number of other 'important and relevant' matters which the decision maker is required under Section 104(2)(d) of the Planning Act 2008. The matters that the Applicant identified as both important and relevant include local development plan policies and major development. In addition, Appendix C of the Planning Statement [**APP-498**] provides an assessment of the Project in relation to local development plans.
		Impacts on emergency services	The Applicant has worked closely with emergency services in designing the Project. In response to feedback received during Statutory Consultation in October 2018, additional direct access points have been provided so that emergency vehicles could access the Project more quickly from the local road network. The Applicant would continue to work closely with the police and other emergency services to ensure the roads are safe and are equipped to deal with crime. Following further engagement with emergency services, the Applicant has revised the locations of the rendezvous points located near the tunnel portals. These are designated areas that allow controlled access for emergency services in the event of an incident. The Applicant consulted on these locations during the Local Refinement Consultation in May 2022.

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			Evidence of the Applicant's engagement with emergency services is provided in the Statement of Engagement [**APP-091**] and the Statements of Common Ground [**APP-093**].
		Modal alternatives to the Project	As set out in Section 5.3 of the Planning Statement [**APP-495**], the role that other transport modes might play in addressing congestion at the Dartford Crossing has been considered from the outset. The Project would create opportunities for public transport operators to develop new local and regional bus services, by providing new connectivity between Kent, Thurrock and Essex. Identification and development of these routes is the responsibility of the relevant operators. Local buses will not have to pay the user charge for the Lower Thames Crossing, reducing operating costs for operators as is set out in Section 2.2 of the Road User Charging Statement [**APP-517**]. The provision of a new rail freight crossing of the River Thames, or any other rail freight improvements, as an alternative to the Lower Thames Crossing is not a viable or realistic alternative to the Lower Thames Crossing because there are insufficient rail intermodal distribution terminals or other facilitating infrastructure to support a transfer from road to rail freight and it is unlikely this will change in significantly in the near future, as set out in paragraphs 5.3.9 and 5.3.17 of the Planning Statement [**APP-495**]. The provision of new passenger rail services crossing of the River Thames as an alternative to a Road Crossing is also not considered to be a viable or realistic alternative as set out in paragraph 5.3.16 of the Planning Statement [**APP-495**]. Further information is provided in Annex E.9 and B.2 Rail Alternatives of 9.10 Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].
		Alternative route options and upgrades at the Dartford Crossing	The Project has undergone a thorough assessment of route alternatives, which is presented in Chapter 5 of the Planning Statement [**APP-495**]. Section 5.4 sets out the key stages that led to the selection of the Preferred Route Announcement (PRA) by DfT, and subsequent reappraisal by the Project. With regard to Location A (Additional Capacity at the Existing Dartford Crossing),

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
		.	the Applicant examined options for an additional tunnel or an additional bridge at this location. Table 5.10 sets out how these options were developed together as Route 1. The Applicant has regularly revisited the options selection process prior to the submission of the Application. The reassessment confirmed that: a. Route 1 could not be developed as a free-flowing 70mph solution, as the crossings and approaches would be restricted to 50mph. b. As traffic would still be funnelled through the existing M25/A282 corridor between junction 2 and junction 30, it would not provide resilience on the network. c. Despite lower costs than the preferred route, it delivered lower value for money as the economic benefits were substantially smaller. d. The additional traffic through the existing corridor would exacerbate existing air quality problems and lead to an overall noise disbenefit.

REP1-395 Peter Alan Braben

<table>
<tr><th>Rep ID</th><th>WR Submitter</th><th>WR/Overview/Applicant's Response</th></tr>
<tr><td rowspan="2">REP1-395</td><td rowspan="2">Peter Alan Braben</td><td>WR:
WR link: REP1-395</td></tr>
<tr><td>Overview:
REP1-395 raised issues on the following topics:
The need for the Project
Climate compatibility of the Project
Impacts on human health
Impacts on the countryside
Impacts on habitats and wildlife
The profit incentive of contractors, leading to increased Project costs
Modal alternatives to the Project, specifically railways
The cost of preventing protestors during construction of the Project
Opposition to the Project being given permission
The following table provides the Applicant's responses to those issues.<table><tr><th>WR summary</th><th>Response</th></tr><tr><td>The need for the Project</td><td>The Scheme Objectives are recorded in the Need for the Project [APP-494]. They were agreed between the Applicant and the Department for Transport, and include the requirement to relieve the congested Dartford Crossing and its approach roads.
Table 4.2 of the Planning Statement [APP-495] provides a summary of how the key benefits of the Project support the Scheme Objectives. The benefits of the Project are such that it is the right solution to the issues identified and the Project would support the Scheme Objectives.</td></tr><tr><td>Climate compatibility</td><td>The Project is setting out an industry-leading position in terms of driving out carbon in the preliminary design and setting a framework to continue to reduce its carbon impact</td></tr></table></td></tr>
</table>

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			through the commitments made in the Carbon and Energy Management Plan, which is one of three documents addressing carbon reduction in the DCO application: • Planning Statement Appendix I: Carbon Strategy and Policy Alignment [**APP-504**] states that '*the Project represents a step change in approach for a road scheme of this scale, in terms of the scope and nature of the measures which the Applicant is committing to deliver to reduce emissions during the construction and operation of the new road. Together with the policies which the Government has set out in its Decarbonising Transport Plan (2021), these measures ensure that the Project is aligned with a trajectory to net zero and that the Project's emissions would not therefore be significant, in accordance with relevant guidance.*' • Carbon and Energy Management Plan [**APP-552**] • ES Chapter 15: Climate [**APP-153**] Additionally, a review and the Project's response to legislation, policies and plans relevant to climate is presented in ES Appendix 15.1: Climate Legislation and Policy [**APP-480**]. A second iteration of the Carbon and Energy Management Plan [**APP-552**] would be used to demonstrate the implementation of the carbon commitments secured through the DCO during the construction phase and would set out the ways in which appointed Contractors would demonstrate that carbon emissions are kept within the defined limits. The Project has a commitment to implement the PAS2080 'Carbon Management in Infrastructure' standard, and each Contractor's plan would be refreshed annually to demonstrate it remains consistent with emerging best practice and aligned with their emissions pathway.
		Impacts on human health	A Health and Equalities Impact Assessment (HEqIA) [**APP-539**] has been prepared, which considers the health impacts on local people and communities, including those protected by equality legislation, such as children and older people, during the construction and operation of the Project. The Applicant has also carried out an assessment on population and human health in the ES Chapter 13: Population and Human Health [**APP-151**]. The assessment covers the likely significant effects of the Project on population and human health during construction and operation. The assessment considers potential effects on private property and housing, community land and assets, development land and businesses, agricultural land holdings, and walkers, cyclists and horse riders (WCH).

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			The Design Principles [**APP-516**], Environmental Masterplan [**APP-159 to APP-168**], and ES Appendix 2.2: Code of Construction Practice (CoCP) [**REP1-157**], which includes the Register of Environmental Actions and Commitments (REAC), all form part of the Project control plan. The control plan is the framework for mitigating, monitoring and controlling the effects of the Project. It is made up of a series of 'control documents' which present the mitigation measures identified in the application that must be implemented during design, construction and operation to reduce the adverse effects of the Project.
		Impacts on the countryside	The Applicant has assessed the impacts of both the operation and construction of the Project on the surrounding landscape in ES Chapter 7: Landscape and Visual [**APP-145**], and proposed measures to manage these impacts where appropriate are outlined in the CoCP and REAC [**REP1-157**].
		Impacts on habitats and wildlife	The effects of the Project on Terrestrial Biodiversity have been assessed within Environmental Statement (ES) Chapter 8: Terrestrial Biodiversity [**APP-146**] including assessments of designated areas, such as Sites of Special Scientific Interest (SSSIs), and ancient woodlands and veteran trees. It is explained in Section 8.3 of ES Chapter 8 that the assessment has regard to both direct and indirect impacts, including severance or fragmentation of habitats or wildlife corridors. ES Chapter 8 describes the magnitude of the impacts, and the measures proposed to avoid, reduce, and compensate for the effects on sensitive ecological receptors, including ancient woodland and veteran trees. Proposed measures to manage these impacts where appropriate are outlined in the CoCP and REAC [**REP1-157**].
		The profit incentive of contractors, leading to increased Project costs	Financial controls both within and outside the provisions of the Development Consent Order have been developed for the delivery of the Project. The physical scope of the Project and the land on which it is permitted to be built, if development consent is granted, would be set out in the Development Consent Order and related documents. The Applicant would oversee the financial performance of its appointed contractors according to the terms agreed between all relevant parties and in line with its established contract management practices, which have been developed through continuous involvement in road development schemes.
		Modal alternatives to the Project, specifically railways	As set out in Section 5.3 of the Planning Statement [**APP-495**], the role that other transport modes, including rail, might play in addressing congestion at the Dartford Crossing has been considered from the outset.

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			The provision of a new rail freight crossing of the River Thames, or any other rail freight improvements, as an alternative to the Lower Thames Crossing is not a viable or realistic alternative to the Lower Thames Crossing because there are insufficient rail intermodal distribution terminals or other facilitating infrastructure to support a transfer from road to rail freight and it is unlikely this will change in significantly in the near future, as set out in paragraphs 5.3.9 and 5.3.17 of the Planning Statement [**APP-495**]. The provision of new passenger rail services crossing of the River Thames as an alternative to a Road Crossing is also not considered to be a viable or realistic alternative as set out in paragraph 5.3.16 of the Planning Statement [**APP-495**]. Further information is provided in Annex B.2 Rail Alternatives of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].
		The cost of preventing protestors during construction of the Project	Section 6.7 of the Code of Construction Practice [**REP1-157**] explains that the Project's contractors will be required to develop a Security Management Plan (SMP) which would be reviewed and approved by the Applicant to ensure it achieves the desired security outcomes, including: a. all reasonable measures to reduce and negate any impact to the Project and/or programme due to security related incidents. Those measures are expected to be, as a minimum, the provision of appropriate fencing, hoarding, security personnel, CCTV and/or site boundary surveillance associated with the prevention of criminal and/or trespass related incursion b. all reasonable measures to negate and minimise the likelihood of protester actions which require the mobilisation of specialist support removal teams or resources that would be required to prevent, deter or remove instances of direct protester action as defined in the SEP. The Contractor would be responsible for non-specialised removal of protestors and trespassers from the site, its compounds, and other work areas under their control. This includes dealing with incursions involving large numbers of protestors.
		Opposition to the Project being given permission	Opposition is noted.

REP1-398 Richard Keegan

<table>
<tr><th>Rep ID</th><th>WR Submitter</th><th>WR/Overview/Applicant's Response</th></tr>
<tr><td rowspan="2">REP1-398</td><td rowspan="2">Richard Keegan</td><td>WR:
WR link: REP1-398</td></tr>
<tr><td>Overview:
REP1-398 raised issues on the following topics:
• Comments expressing concern about the need for the Project
• Comments expressing concern at the Project's cost and whether it provides value for money
• Comments expressing concern that the Project has not considered alternative modes of transport, such as rail and tram
• Concerns about the Project's impact on the climate, and whether the proposals reflect government policy and international agreements
• Concerns regarding the Project's impacts on air quality, including particulate levels
The following table provides the Applicant's responses to those issues.
<table>
<tr><th>WR summary</th><th>Response</th></tr>
<tr><td>Comments expressing concern about the need for the Project</td><td>The Scheme Objectives are recorded in the Need for the Project [APP-494]. They were agreed between the Applicant and the Department for Transport, and include the requirement to relieve the congested Dartford Crossing and its approach roads.
Table 4.2 of the Planning Statement [APP-495] provides a summary of how the key benefits of the Project support the Scheme Objectives. The benefits of the Project are such that it is the right solution to the issues identified and the Project would support the Scheme Objectives.</td></tr>
<tr><td>Comments expressing concern at the Project's cost and whether it provides value for money</td><td>Achieving value for money is one of the Scheme Objectives and a Value for Money (VfM) assessment has been carried out. As detailed in the Need for the Project [APP-494] it represents positive value for money as the substantial benefits of the Project outweigh the costs.
The Economic Appraisal Report (EAR) within Appendix D: Economic Appraisal Package of the Combined Modelling and Appraisal Report (ComMA) [APP-526] describes the methodologies used to appraise the economic, environmental, social benefits, disbenefits,</td></tr>
</table></td></tr>
</table>

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			revenues and costs of the Project and presents the appraisal results. The appraisal informs the Project's VfM assessment. The appraisal, which uses outputs from the Lower Thames Area Model (LTAM) transport model, aligns with the principles in HM Treasury Green Book (HM Treasury, 2022) and is based on the methodologies in the DfT's Transport Analysis Guidance (TAG).
		Comments expressing concern that the Project has not considered alternative modes of transport, such as rail and tram	As set out in Section 5.3 of the Planning Statement [**APP-495**], the role that other transport modes might play in addressing congestion at the Dartford Crossing has been considered from the outset. The Project would create opportunities for public transport operators to develop new local and regional bus services, by providing new connectivity between Kent, Thurrock and Essex. Identification and development of these routes is the responsibility of the relevant operators. Local buses will not have to pay the user charge for the Lower Thames Crossing, reducing operating costs for operators as is set out in Section 2.2 of the Road User Charging Statement [**APP-517**]. The provision of a new rail freight crossing of the River Thames, or any other rail freight improvements, as an alternative to the Lower Thames Crossing is not a viable or realistic alternative to the Lower Thames Crossing because there are insufficient rail intermodal distribution terminals or other facilitating infrastructure to support a transfer from road to rail freight and it is unlikely this will change in significantly in the near future, as set out in paragraphs 5.3.9 and 5.3.17 of the Planning Statement [**APP-495**]. The provision of new passenger rail or light services crossing of the River Thames as an alternative to a Road Crossing is also not considered to be a viable or realistic alternative as set out in paragraph 5.3.16 of the Planning Statement [**APP-495**]. Further information is provided in Annex E.9 and B.2 Rail Alternatives of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].
		Concerns about the Project's impact on the climate, and whether the proposals reflect government policy and international agreements	The Project is setting out an industry-leading position in terms of driving out carbon in the preliminary design and setting a framework to continue to reduce its carbon impact through the commitments made in the Carbon and Energy Management Plan, which is one of three documents addressing carbon reduction in the DCO application: • Planning Statement Appendix I: Carbon Strategy and Policy Alignment [**APP-504**] states that '*the Project represents a step change in approach for a road scheme of this scale, in terms of the scope and nature of the measures which the Applicant is committing to deliver to reduce emissions during the construction and operation of the new road. Together with the policies which the Government has set out in its*

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			Decarbonising Transport Plan (2021), these measures ensure that the Project is aligned with a trajectory to net zero and that the Project's emissions would not therefore be significant, in accordance with relevant guidance.' • Carbon and Energy Management Plan [**APP-552**] • ES Chapter 15: Climate [**APP-153**] Additionally, a review and the Project's response to legislation, policies and plans relevant to climate is presented in ES Appendix 15.1: Climate Legislation and Policy [**APP-480**]. A second iteration of the Carbon and Energy Management Plan [**APP-552**] would be used to demonstrate the implementation of the carbon commitments secured through the DCO during the construction phase and would set out the ways in which appointed Contractors would demonstrate that carbon emissions are kept within the defined limits. The Project has a commitment to implement the PAS2080 'Carbon Management in Infrastructure' standard, and each Contractor's plan would be refreshed annually to demonstrate it remains consistent with emerging best practice and aligned with their emissions pathway.
		Concerns regarding the Project's impacts on air quality, including particulate levels .	The Applicant has assessed the air quality impacts of both the operation and construction of the Project in ES Chapter 5 [**APP-143**], and proposed measures to manage these impacts where appropriate are outlined in the CoCP and REAC [**REP1-157**]. The air quality assessment reported in ES Chapter 5: Air Quality [**APP-143**] demonstrates that the Project would comply with the current legal thresholds for PM2.5. Air quality modelling confirmed that there would be no exceedances of the annual mean PM2.5 AQS objective of 25µg/m3 and the annual mean PM2.5 Limit Value of 20µg/m3 across the study area in both the Do-Minimum and Do-Something scenarios of the construction and operational phases.

REP1-399 Robert Lane

<table>
<tr><th>Rep ID</th><th>WR Submitter</th><th>WR/Overview/Applicant's Response</th></tr>
<tr><td rowspan="2">REP1-399</td><td rowspan="2">Robert Lane</td><td>WR:
WR link: REP1-399</td></tr>
<tr><td>Overview:
REP1-399 raised issues on the following topics:
Need for Project
EIA methodology
Alternatives / Route Selection / Improper 2016 Consultation
Resilience / Dartford incident / WNI
A2/M2 link capacity / Brewers Road connection to M2
Safety / smart motorways
Charging / local resident discount
Late change to tunnelling methodology
Cost
The following table provides the Applicant's responses to those issues.
<table>
<tr><th>WR summary</th><th>Response</th></tr>
<tr><td>Claims that National Highways has failed to properly examine alternative options as required under the environmental impact assessment.
National Highways failed to consult properly in 2016 on alternative options including Option A14.</td><td>The Project has undergone a thorough assessment of route alternatives, which is presented in Chapter 5 of the Planning Statement [APP-495]. Section 5.4 sets out the key stages that led to the selection of the Preferred Route Announcement (PRA) by DfT, and subsequent reappraisal by the Project. With regard to Location A (Additional Capacity at the Existing Dartford Crossing), the Applicant examined options for an additional tunnel or an additional bridge at this location. Table 5.10 sets out how these options were developed together as Route 1.</td></tr>
</table></td></tr>
</table>

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			The Applicant has regularly revisited the options selection process prior to the submission of the Application. The reassessment confirmed that: a. Route 1 could not be developed as a free-flowing 70mph solution, as the crossings and approaches would be restricted to 50mph. b. As traffic would still be funnelled through the existing M25/A282 corridor between junction 2 and junction 30, it would not provide resilience on the network. c. Despite lower costs than the preferred route, it delivered lower value for money as the economic benefits were substantially smaller. d. The additional traffic through the existing corridor would exacerbate existing air quality problems and lead to an overall noise disbenefit. The 2016 route options consultation contained information about why Location C was being pursued instead of Location A. This was a matter consultees were able to comment on, and indeed did so, leading to the preparation of a further assessment to support the decision. Further assessment on Location A (route 1) was undertaken following the close of the 2016 consultation. The Secretary of State set out the preferred route at Location C in 2017, and the basis for not selecting Location A (and specifically Route 1) were provided in Section 3.2 of the Post Consultation Scheme Assessment Report Volume 7 (Highways England, 2017).
		The Lower Thames Crossing fails to provide resilience in the event of an incident at Dartford.	The Project would include junctions with key parts of the strategic road network (SRN), such as the A2/M2, A13/A1089 and M25. It would also provide connections to a number of local roads via the junctions at Orsett Cock in Thurrock and at Gravesend East. The new road would feature advanced safety systems, including variable mandatory speed limits, red-X lane signalling to support incident management, stopped vehicle detection systems, CCTV, and emergency areas for road users to access in an emergency. Incident management plans and protocols would play a key part in minimising the impact of incidents. The number of incidents and collisions at the Dartford Crossing would fall as a result of the reduced traffic flows, which would improve resilience at both crossings. As a result of the average 19% reduction in traffic in the peak hours the impact of incidents on the road network would be reduced and the road network would be able to recover faster. Further information is provided in the Project Design Report [**APP-506 to APP-515**] and the Design Principles [**APP-516**].

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
		The project fails to provide sufficient capacity on the A2/M2 link. Loss of connection between Brewers Road to the M2	The proposed route south of the river is predicted to attract more traffic to the A2/M2 corridor (to the east of the Project) as traffic changes route to use the new road crossing. However, the route is predicted to remain free flowing. The A2 near the junction with the Project would be upgraded to provide additional capacity by separating some traffic movements. In line with a standard highways design approach at many grade-separated junctions, the A2 would be reduced to two through-lanes as it passes through the proposed junction with the Project. The Applicant's traffic modelling has shown that this would be sufficient to accommodate predicted traffic flows far into the future. Direct access to the M2 from Brewers Road would no longer be possible because to comply with safety standards, as set out in the Design Manual for Roads and Bridges, a parallel connector road on the A2/M2 corridor (from the junction with the A122 Lower Thames Crossing to M2 junction 1) is required. The connection to the A2/M2 westbound from Halfpence Lane roundabout was removed from the design to accommodate the off-slip linking the A2/M2 westbound with the A122 Lower Thames Crossing. Trying to accommodate both would mean having an off-slip and on-slip in close proximity on the A2/M2, which would not comply with safety standards. Design options here are limited because space is highly constrained, including by the presence of the HS1 railway line. Even though some journeys would be less direct with the Project in place than they are currently, all connections are possible. Further information on the Project's connectivity with the surrounding road network is provided in section 4.5.3 of 9.10 Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**], and in in the Project Design Report [**APP-506 to APP-515**] and the Design Principles [**APP-516**].
		The project application fails to address or mitigate against traffic rat-running on the local road network.	The main considerations for connectivity with the surrounding road network are likely journey origins and destinations, physical and environmental constraints, compatibility of junction location and type, and suitability for use on an All-Purpose Trunk Road. The desire to provide more local connections to and from the Project must be balanced against the need to ensure free-flowing connections with the SRN and safety for all road users. Other considerations are increased traffic on local roads arising from additional connections and increased environmental effects associated with large junctions. Where direct local connections are not provided, it is generally possible to connect to the Project by first joining roads on the SRN that are served by the proposed junctions. Further information on the Project's connectivity with the surrounding road network is provided in section 4.5.3 of 9.10 Post-event submissions, including written submission of

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			oral comments, for ISH1 [**REP1-183**], and in in the Project Design Report [**APP-506 to APP-515**] and the Design Principles [**APP-516**].
		The project application seeks to circumvent the 5-year moratorium on all-lane running smart motorways, introduced by the Government in January 2022.	Safety is National Highways' highest priority. The design of the A122 seeks to further enhance safety, beyond that of a conventional All Purpose Trunk Roads (APTRs), through addition of technology services and features to better support the road user. APTRs have been in existence for many years and are used regularly by the public. Like other ATPRs, the A122 will typically have 1m nearside and offside hard strips and no hard shoulder. Therefore, the appropriate design and operation for the A122 is that of an APTR with enhanced safety and operational features. The key design philosophy is that A122 is an APTR, not a motorway or ALR motorway. The operation of APTRs without hard shoulders is not a recent development. There are many hundreds of miles of APTR, without hard shoulder, currently in operation across the country which are used by millions of road users each year. Whilst there are many facets involved in determining the design and operating regime for a road, key factors for the A122 are as follows: a. User safety. b. The A122 is new build and not a conversion of an existing road. c. Purpose of route and route consistency, taking into account the interfaces that the A122 has with APTRs (A2, A13, A1089), M25 and the local road network. d. Operation of the road tunnel. Further information is provided in 9.17 Issue Specific Hearing 1 Action number 3 Design and operational distinction between an all purpose trunk road (APTR) and smart motorway [**REP1-196**]
		Concerns about the impacts of restrictions to the Local Residents' Discount Scheme.	The decision to require eligible road users to pay a charge to use the tunnel section of the Project is in line with paragraph 3.25 of the National Policy Statement for National Networks (Department for Transport, 2014). Without prejudice to any decision by the Secretary of State on the grant of development consent, the Department for Transport has reviewed details of the proposed road user charging regime for the Project and has confirmed that they are in line with government policy. The Road User Charging Statement [**APP-517**] explains the road user charging powers that are being sought through the draft DCO [**REP1-042**]. This includes an explanation of why charges are considered necessary, how they would be set and how they would be enforced. The Road User Charging Statement [**APP-517**] sets out the proposal for residents who pay their council tax to Gravesham Borough Council or Thurrock Council to benefit from a Local Residents' Discount Scheme (LRDS), offering similar reductions in crossing charges

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			of a similar type to those currently in operation at the Dartford Crossing. The proposal aligns with the Dartford Crossing LRDS by limiting eligibility to residents of local authorities in which the tunnel portals would be situated.
		Concerns there has been no proper consultation or consideration of the proposed change to tunnelling methodology. Questions about how the tunnel boring machine will be turned round to go back north and if extra land or vehicle movements will be needed, and where the staff and logistics be accommodated? And how will the slurry and excavated material be removed when the tunnel is being bored from Kent to Essex?	The Applicant undertook a non-statutory Minor Refinement Consultation from 17 May to 19 June 2023 on proposed changes to the Project. Chapter 4 of the consultation booklet set out how the Project's two tunnels under the River Thames could be constructed by either using two tunnel boring machines (TBMs) or by using a single TBM. The chapter explained how the works would be carried out if a single TBM were to be used, which is a departure from the tunnel construction methodology set out in the DCO application, which assumed works would be undertaken using two TBMs Although the consultation was undertaken on a non-statutory basis, on 15 May 2023, the Applicant notified all of the organisations previously consulted under section 42(1)(a)-(c) of the Planning Act 2008 by letter and, in addition a total of 47 section 42(1)(d) consultees were sent a letter, notifying them of the launch of the consultation. Emails were sent to more than 43,000 subscribers on the Project's customer database, informing them of the minor refinement consultation and inviting them to give their views. A news release was issued, updates provided on social media and the Applicant published non-statutory notices in newspapers advertising the consultation. The indicative tunnelling programme remains consistent with the programme shown in Plate 2.13 on page 147 in the Environmental Statement Chapter 2: Project Description [**APP-140**]. The TBM will be turned around within the southern portal structure. The duration of the turnaround will be determined by the Delivery Partner. No additional vehicle movements would be generated or land required taking the spoil back through the tunnel to the north of the river as the material would be pumped through the tunnel. Please refer to the Workers Accommodation Report [**APP-551**] for information on estimated worker numbers and accommodation for TBM(s). Numbers for one TBM will be slightly lower associated with the reduction in the number of TBMs. The workers accommodation will still be on the north side of the river As noted within the consultation booklet, there would be an overall reduction in movements related to the tunnelling activities if a single TBM was chosen. As the remainder of the construction programme and movements would not be affected by this change, this means that overall, the total number of vehicle movements would reduce.

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			Slurry treatment and tunnel segment production remains the same as described in the Environmental Statement Chapter 2: Project Description [**APP-140**]. Please refer to paragraphs 2.7.147 to 2.7.150. All tunnel production activities remain within the North portal, and slurry from the northbound tunnel drive would be pumped through a pipe network to the north portal through the tunnel that would already have been constructed by the southbound drive. The spoil arising from the tunnelling process, as described in the consultation material, will be a slurry of chalk and water, which is fluid and can be pumped through pipelines. The excavation arisings from the tunnelling, suspended in a water-based slurry as detailed in the Environmental Statement Chapter 2: Project Description [**APP-140**], paragraph 2.7.147 will be pumped via a pipe network from the cutter head back to the slurry treatment plant (STP) which is located within the North Portal. Annex C of the Cover Letter for Deadline 1 [**REP1-001**] provides further information on the approach to single tunnel boring machine.
		The cost and environmental impact of the project is unacceptable.	Achieving value for money is one of the Scheme Objectives and a Value for Money (VfM) assessment has been carried out. As detailed in the Need for the Project [**APP-494**] it represents positive value for money as the substantial benefits of the Project outweigh the costs. The Economic Appraisal Report (EAR) within Appendix D: Economic Appraisal Package of the Combined Modelling and Appraisal Report (ComMA) [**APP-526**] describes the methodologies used to appraise the economic, environmental, social benefits, disbenefits, revenues and costs of the Project and presents the appraisal results. The appraisal informs the Project's VfM assessment. The appraisal, which uses outputs from the Lower Thames Area Model (LTAM) transport model, aligns with the principles in HM Treasury Green Book (HM Treasury, 2022) and is based on the methodologies in the DfT's Transport Analysis Guidance (TAG). The effects of the Project on Terrestrial Biodiversity have been assessed within Environmental Statement (ES) Chapter 8: Terrestrial Biodiversity [**APP-146**] including assessments of designated areas, such as Sites of Special Scientific Interest (SSSIs), and ancient woodlands and veteran trees. It is explained in Section 8.3 of ES Chapter 8 that the assessment has regard to both direct and indirect impacts, including severance or fragmentation of habitats or wildlife corridors.

Rep ID	WR Submitter	WR/Overview/Applicant's Response		
			ES Chapter 8 describes the magnitude of the impacts, and the measures proposed to avoid, reduce, and compensate for the effects on sensitive ecological receptors, including ancient woodland and veteran trees.	

REP1-401 Robert Rudge

Rep ID	WR Submitter	WR/Overview/Applicant's Response
REP1-401	Robert Rudge	**WR:** WR link: **REP1-401**
		Overview: **REP1-401** raised issues on the following topics: • The Project increases congestion on nearby road network • Impact on environment, ancient woodland and protected areas • Noise pollution • Comments expressing concern about whether the Project would achieve its objective of providing congestion relief at the Dartford Crossing, possible traffic growth as a result of the Project, the design capacity of the proposed road, and increased congestion on the wider road network. • Concerns that the Project would cause congestion on local roads and junctions, and whether this is adequately reflected in the Applicant's traffic modelling • Route alternatives - Option A should be reconsidered • Concerns expressed about the methods used by the Applicant to quantify economic benefits of the Project, and a suggestion that the stated benefit-cost ratio is too low. • Comments expressing concern on the grounds that the Project would have a negative impact on sites of archaeological value, including sites that have not been identified by the Applicant • Air quality - poor existing conditions and impacts of the Project • Concerns about the Project's impact on the climate, and whether the proposals reflect government policy and international agreements • Comments expressing concern about the Applicant's public consultations, including concerns that the information provided was misleading or lacked detail, and that consultation feedback was misrepresented or not considered. • Comments expressing concern at the Project's cost and whether it provides value for money The following table provides the Applicant's responses to those issues.

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WR summary	Response
The Project increases congestion on local and wider road network	The DCO Application includes a Wider Network Impacts Management and Monitoring Plan which sets out the Applicant's approach on the forecast wider network impacts of the Project [**APP-545**]. The creation of new capacity on the road network will lead to changes in the way people travel. Some people will choose to make different journeys because shorter or less congested routes become available, and some people who would not previously have travelled will choose to make new journeys because the faster or shorter journey becomes more affordable. As a result, there will be changes in the lengths of journeys made, and in the total number of journeys made. The net increase in kilometres driven is highest in the PM peak hour, with an overall increase of 1.1% in 2030 and 1.23% in 2045. Further information is provided in section A.3 New and longer trips in Annex A of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**]
Impact on environment, ancient woodland and protected areas	The effects of the Project on Terrestrial Biodiversity have been assessed within Environmental Statement (ES) Chapter 8: Terrestrial Biodiversity [**APP-146**] including assessments of designated areas, such as Sites of Special Scientific Interest (SSSIs), and ancient woodlands and veteran trees. It is explained in Section 8.3 of ES Chapter 8 that the assessment has regard to both direct and indirect impacts, including severance or fragmentation of habitats or wildlife corridors. ES Chapter 8 describes the magnitude of the impacts, and the measures proposed to avoid, reduce, and compensate for the effects on sensitive ecological receptors, including ancient woodland and veteran trees.
Noise pollution	The Applicant has assessed the potential noise impacts from both the operation and construction of the Project and proposes mitigation measures to manage this impact. This is reported in ES Chapter 12 [**APP-150**] and the control measures are detailed in the CoCP and REAC [**REP1-157**].
Comments expressing concern about whether the Project would achieve its objective of providing congestion relief at the Dartford Crossing, possible traffic growth as a result of the Project,	The Scheme Objectives are recorded in the Need for the Project [**APP-494**]. They were agreed between the Applicant and the Department for Transport, and include the requirement to relieve the congested Dartford Crossing and its approach roads.

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		and the design capacity of the proposed road	Table 4.2 of the Planning Statement [**APP-495**] provides a summary of how the key benefits of the Project support the Scheme Objectives. The benefits of the Project are such that it is the right solution to the issues identified and the Project would support the Scheme Objectives. In Annex A of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**], Section A.2 explains how the reduction of traffic at the Dartford Crossing is linked to the benefits of the Project: '*To understand the performance of the Dartford Crossing, in scenarios with and without the proposed A122 Lower Thames Crossing (ie the Do Minimum and Do Something scenarios) it is the journey time benefits and the journey time reliability benefits that provide the means to understand the benefits of the project, and to assess whether the proposed new road would continue to provide relief to the Dartford Crossing into the future.*'
		Concerns that the Project would cause congestion on local roads and junctions, and whether this is adequately reflected in the Applicant's traffic modelling	The Project would include junctions with key parts of the strategic road network (SRN), namely the A2/M2, A13/A1089 and M25. It would also provide connections to a limited number of local roads via the junctions at Orsett Cock and Gravesend East. While there would be negative impacts on traffic flow in some locations, the Applicant considers that no additional interventions are necessary beyond the proposals presented in the application for development consent. For more information about the impacts on the strategic road network (SRN) and local roads, see the Traffic Forecasts Non-Technical Summary [**APP-528**]. The Transport Assessment [**APP-529**] presents where there would be changes to the road network on roads away from the Project alignment during both the construction and operational phases of the Project. Chapter 1 of the Wider Network Impacts Management and Monitoring Plan [**APP-545**] presents the proposed approach to monitoring the traffic impacts of the Project on the wider road network once the Project is operational. The Applicant's traffic modelling has been carried out in accordance with the transport analysis guidance from the Department for Transport (DfT) (2021b) and using data available from 2016. Due to changes in traffic flows as a result of the COVID-19 pandemic, data from after 2019 would not have been suitable for the Applicant's traffic modelling. The traffic model data is collated and used in accordance with DfT guidance.

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			With regards to congestion and time savings, the Applicant's traffic modelling uses the most up-to-date Government guidance at the time of submission, which means opportunities for underestimating traffic flows are minimised and the predictions provide a robust basis upon which to design the Project for expected requirements on opening and for future usage. The Applicant's transport model covers in detail the roads in Kent, Thurrock, Essex and Havering, as well as the eastern part of Greater London, extending out to major roads within the area around the entire M25, and including a wider road network that extends across the whole of England, Scotland and Wales. This area is appropriate because it models all of the primary roads likely to be affected by the Project. While the modelling includes forecasts for some minor roads, it is outside the scope of this type of strategic modelling to provide street-by-street predictions of how traffic flows would change once the Project is operational. For more information about how the Applicant has carried out traffic modelling following industry best practice, see Combined Modelling and Appraisal Report [**APP-518**], including Appendices A, B and C [**APP-519** to **APP-523**]. A summary of the methodology is included in Traffic Forecasts Non-Technical Summary [**APP-528**]. The Localised Traffic Modelling report [**REP1-187**] sets out the localised traffic modelling work completed by the Applicant during the development of the Project.
		Route alternatives - Option A should be reconsidered	The Project has undergone a thorough assessment of route alternatives, which is presented in Chapter 5 of the Planning Statement [**APP-495**]. Section 5.4 sets out the key stages that led to the selection of the Preferred Route Announcement (PRA) by DfT, and subsequent reappraisal by the Project. With regard to Location A (Additional Capacity at the Existing Dartford Crossing), the Applicant examined options for an additional tunnel or an additional bridge at this location. Table 5.10 sets out how these options were developed together as Route 1. The Applicant has regularly revisited the options selection process prior to the submission of the Application. The reassessment confirmed that: a. Route 1 could not be developed as a free-flowing 70mph solution, as the crossings and approaches would be restricted to 50mph.

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			b. As traffic would still be funnelled through the existing M25/A282 corridor between junction 2 and junction 30, it would not provide resilience on the network. c. Despite lower costs than the preferred route, it delivered lower value for money as the economic benefits were substantially smaller. d. The additional traffic through the existing corridor would exacerbate existing air quality problems and lead to an overall noise disbenefit.
		Concerns expressed about the methods used by the Applicant to quantify economic benefits of the Project, and a suggestion that the stated benefit-cost ratio is too low.	Achieving value for money is one of the Scheme Objectives and a Value for Money (VfM) assessment has been carried out. As detailed in the Need for the Project [**APP-494**] it represents positive value for money as the substantial benefits of the Project outweigh the costs. The Economic Appraisal Report (EAR) within Appendix D: Economic Appraisal Package of the Combined Modelling and Appraisal Report (ComMA) [**APP-526**] describes the methodologies used to appraise the economic, environmental, social benefits, disbenefits, revenues and costs of the Project and presents the appraisal results. The appraisal informs the Project's VfM assessment. The appraisal, which uses outputs from the Lower Thames Area Model (LTAM) transport model, aligns with the principles in HM Treasury Green Book (HM Treasury, 2022) and is based on the methodologies in the DfT's Transport Analysis Guidance (TAG). The Applicant's position is that the Benefit Cost Ratio (BCR) of the Project is robust, measurable and has been undertaken in line with the DfT's Transport Analysis Guidance (TAG), as set out in the Combined Modelling and Appraisal Report [**APP-526**]. The assured costs, as presented in the application, take into account labour, material and inflation. These adequately represent the Applicant's current position in relation to these cost items. The net scheme costs were assured by the Applicant in February 2022 as stated in Table 4.4 of the Combined Modelling and Appraisal Report Appendix D [**APP-526**]. Further information is provided in Section 4.8 and Annex H of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].
		Comments expressing concern on the grounds that the Project would have a negative impact on sites of	As part of the Environmental Impact Assessment (EIA), the Applicant has considered cultural heritage across the Application Site, including designated and non-designated assets, and their settings. These assessments are detailed

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		archaeological value, including sites that have not been identified by the Applicant	in Environmental Statement (ES) Chapter 6: Cultural Heritage [**AS-044**], which also includes the proposed mitigation measures. The Applicant liaised with relevant stakeholders such as local authorities and Historic England to better understand the setting of historic assets and their significance, enabling the changes to the setting to be reduced where possible. As in all areas of environmental mitigation, the Applicant has sought a holistic programme of mitigation with regards to heritage assets, with consideration for them being closely linked to landscape and ecology mitigation measures. Trial trenching (ground investigations for cultural artefacts) has been conducted across the Application Site. Any finds of archaeological importance have been dealt with on a per-case basis. The assessment of the construction phase of the Project shows mitigation would be needed to reduce the impacts on buried archaeological remains and built heritage, which would be caused by their partial or total removal by construction activity. This would take the form of essential mitigation designed for the specific impact, as well as implementing good practice mitigation. This good practice mitigation would include fencing and screening of construction compounds, and dust and noise reduction measures. Mitigation is also required to reduce impacts through changes to the setting of heritage assets that would affect their value. This would take the form of good practice mitigation measures, including fencing and screening of construction compounds, and dust and noise reduction measures. Where archaeological remains or built heritage features need to be removed, a detailed cultural record would be created beforehand. There would be significant impacts on cultural heritage during construction. Section 6.4 of ES Chapter 6: Cultural Heritage [**AS-044**] sets out the baseline conditions in the vicinity of the Project. Section 6.6 presents the impacts from the Project. This confirms there are 45 heritage assets of archaeological interest being removed by the Project including four Bronze Age barrows. These impacts would be mitigated by archaeological excavation and recording (REAC Ref. CH001; AMS-OWSI No. 4). As well as aligning and designing the Project to reduce impacts on cultural heritage assets, specific mitigation measures would include designing road

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			lighting to have minimal impact, planting trees to preserve views of heritage assets, and reinstating land after construction to preserve field patterns. These commitments include measures to preserve heritage assets that have been identified and assessed by the Applicant. These measures include provision for rigorous controls on what the Applicant and appointed Contractors are allowed to do during the construction phase and once the Project is operational. The commitments to mitigation made in the Application Documents such as ES Appendix 2.2: Code of Construction Practice (CoCP) [**REP1-157**], including the Register of Environmental Actions and Commitments (REAC), and ES Appendix 6.9: Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation [**APP-367**] would be legally binding under the terms of the various requirements set out in Part 1 of Schedule 2 of the draft Development Consent Order [**REP1-042**].
		Air quality - poor existing conditions and impacts of the Project	The Applicant has assessed the air quality impacts of both the operation and construction of the Project in ES Chapter 5 [**APP-143**], and proposed measures to manage these impacts where appropriate are outlined in the CoCP and REAC [**REP1-157**]. The air quality assessment reported in ES Chapter 5: Air Quality [**APP-143**] demonstrates that the Project would comply with the current legal thresholds for PM2.5. Air quality modelling confirmed that there would be no exceedances of the annual mean PM2.5 AQS objective of 25µg/m3 and the annual mean PM2.5 Limit Value of 20µg/m3 across the study area in both the Do-Minimum and Do-Something scenarios of the construction and operational phases.
		Concerns about the Project's impact on the climate, and whether the proposals reflect government policy and international agreements	The Project is setting out an industry-leading position in terms of driving out carbon in the preliminary design and setting a framework to continue to reduce its carbon impact through the commitments made in the Carbon and Energy Management Plan, which is one of three documents addressing carbon reduction in the DCO application: • Planning Statement Appendix I: Carbon Strategy and Policy Alignment [**APP-504**] states that '*the Project represents a step change in approach for a road scheme of this scale, in terms of the scope and nature of the measures which the Applicant is committing to deliver to reduce emissions during the construction and operation of the new road. Together with the policies which*

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			the Government has set out in its Decarbonising Transport Plan (2021), these measures ensure that the Project is aligned with a trajectory to net zero and that the Project's emissions would not therefore be significant, in accordance with relevant guidance.' • Carbon and Energy Management Plan [**APP-552**] • ES Chapter 15: Climate [**APP-153**] Additionally, a review and the Project's response to legislation, policies and plans relevant to climate is presented in ES Appendix 15.1: Climate Legislation and Policy [**APP-480**]. A second iteration of the Carbon and Energy Management Plan [**APP-552**] would be used to demonstrate the implementation of the carbon commitments secured through the DCO during the construction phase and would set out the ways in which appointed Contractors would demonstrate that carbon emissions are kept within the defined limits. The Project has a commitment to implement the PAS2080 'Carbon Management in Infrastructure' standard, and each Contractor's plan would be refreshed annually to demonstrate it remains consistent with emerging best practice and aligned with their emissions pathway.
		Comments expressing concern about the Applicant's public consultations, including concerns that the information provided was misleading or lacked detail, and that consultation feedback was misrepresented or not considered.	The pre-application consultations were carried out to the required standard as evidenced in the Consultation Report, as ratified by the Planning Inspectorate in accepting the Application.
		Comments expressing concern at the Project's cost and whether it provides value for money	Achieving value for money is one of the Scheme Objectives and a Value for Money (VfM) assessment has been carried out. As detailed in the Need for the Project [**APP-494**] it represents positive value for money as the substantial benefits of the Project outweigh the costs. The Economic Appraisal Report (EAR) within Appendix D: Economic Appraisal Package of the Combined Modelling and Appraisal Report (ComMA) [**APP-526**] describes the methodologies used to appraise the economic, environmental, social benefits, disbenefits, revenues and costs of the Project and presents the appraisal results. The appraisal informs the Project's VfM assessment. The appraisal, which uses outputs from the Lower Thames Area Model (LTAM)

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			transport model, aligns with the principles in HM Treasury Green Book (HM Treasury, 2022) and is based on the methodologies in the DfT's Transport Analysis Guidance (TAG).

REP1-403 Robin Beard

Rep ID	WR Submitter	WR/Overview/Applicant's Response
REP1-403	Robin Beard	**WR:** WR link: **REP1-403**
		Overview: The Applicant welcomes the comprehensive written representation made by Mr Beard at Deadline 1, including the provision of additional information over and above that presented at Open Floor Hearing 2. The Applicant is currently reviewing the alternative route and junction proposals put forward by Mr Beard, together with the associated commentary and will provide a response to the proposals in due course.

REP1-411 Simon Johnson

<table>
<tr><th>Rep ID</th><th>WR Submitter</th><th>WR/Overview/Applicant's Response</th></tr>
<tr><td rowspan="2">REP1-411</td><td>Simon Johnson</td><td>WR:
WR link: REP1-411</td></tr>
<tr><td></td><td>Overview:
REP1-411 raised issues on the following topics:
• Concerns about the Project's impact on the climate, and whether the proposals reflect government policy and international agreements
• Comments on the subject of community benefits arising from the Project, including concerns that there would be no such benefits
• Comments expressing concern that the Project may impact the delivery of proposed housing
• Comments expressing concern at the Project's cost and whether it provides value for money
• Comments expressing concern that the Project has not considered alternative modes of transport, including rail
• Comments expressing concern that not all connections between the Project and the SRN are proposed.
• Concerns expressed about the methods used by the Applicant to quantify economic benefits of the Project, and a suggestion that the stated benefit-cost ratio is too low.
• Claims that the Project's transport model does not reflect actual conditions or the impacts of the COVID-19 pandemic
• Comments expressing concern that the Project is not environmentally sustainable.
The following table provides the Applicant's responses to those issues.
<table><tr><th>WR summary</th><th>Response</th></tr><tr><td>Concerns about the Project's impact on the climate, and whether the proposals reflect government policy and international agreements</td><td>The Project is setting out an industry-leading position in terms of driving out carbon in the preliminary design and setting a framework to continue to reduce its carbon impact through the commitments made in the Carbon and Energy Management Plan, which is one of three documents addressing carbon reduction in the DCO application:
• Planning Statement Appendix I: Carbon Strategy and Policy Alignment [APP-504] states that 'the Project represents a step change in approach for a road scheme of this</td></tr></table></td></tr>
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Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			scale, in terms of the scope and nature of the measures which the Applicant is committing to deliver to reduce emissions during the construction and operation of the new road. Together with the policies which the Government has set out in its Decarbonising Transport Plan (2021), these measures ensure that the Project is aligned with a trajectory to net zero and that the Project's emissions would not therefore be significant, in accordance with relevant guidance.' • Carbon and Energy Management Plan [**APP-552**] • ES Chapter 15: Climate [**APP-153**] Additionally, a review and the Project's response to legislation, policies and plans relevant to climate is presented in ES Appendix 15.1: Climate Legislation and Policy [**APP-480**]. A second iteration of the Carbon and Energy Management Plan [**APP-552**] would be used to demonstrate the implementation of the carbon commitments secured through the DCO during the construction phase and would set out the ways in which appointed Contractors would demonstrate that carbon emissions are kept within the defined limits. The Project has a commitment to implement the PAS2080 'Carbon Management in Infrastructure' standard, and each Contractor's plan would be refreshed annually to demonstrate it remains consistent with emerging best practice and aligned with their emissions pathway.
		Comments on the subject of community benefits arising from the Project, including concerns that there would be no such benefits	The benefits and outcomes that are to be delivered and secured by the Project and through the DCO are set out in a range of documents provided as part of the application for development consent. The Combined Modelling and Appraisal Report (ComMA) Appendix D [**APP-524** to **APP-527**] includes the Economic Appraisal Report (EAR) [**APP-526**] and the Wider Economic Impacts Report [**APP-527**]. Together, these set out the benefits of the Project which have been calculated using the Department for Transport's transport analysis guidance (TAG). The Combined Modelling and Appraisal Report, Chapter 7 [**APP-518**] provides a summary of how the benefits and disbenefits of the Project have been evaluated and quantified across a series of different themes, including transport user benefits, environmental impacts and wider economic impacts. The Project would deliver a range of other planning policy, environmental and sustainability objectives. These are set out in a number of documents, including the Need for the Project [**APP-494**], the Planning Statement [**APP-495**], and the Sustainability Statement [**APP-544**]. Appendix B of Section 106 Agreements – Heads of Terms [**APP-505**] includes a Skills, Education and Employment Strategy. The document describes the Applicant's

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			commitment to two community funds which provides a mechanism to address some of the residual impacts of the Project: • Community Fund (South) - £0.63 million to be administered by the Kent Community Foundation • Community Fund (North) - £1.26 million to be administered by the Essex Community Foundation. The document sets out the proposed criteria for valid applications for funds, for example that applicants must be a registered charity, voluntary organisation, social enterprise or public body. Further to this, the Applicant has set out the benefits as well as the impacts and proposed mitigation for each community within the vicinity of the Project in the Community Impact Report [**APP-549**]. The Applicant has designed the Project to provide additional benefits to local people once it is operational, such as including new areas of landscaped recreational land at Chalk Park and Tilbury Fields, as well as an upgraded network of Public Rights of Way. Once the Project is operational, there would be beneficial impacts on many cross river journeys, as well as on other routes. There would also be significant positive impacts on jobs and training opportunities; the provision of walking, cycling and horse-riding routes; as well as access to new areas of recreational land at Tilbury Fields and Chalk Park. There would be both positive and negative impacts on noise due to changes in traffic flows at different locations.
		Comments expressing concern that the Project may impact the delivery of proposed housing	The Project has undergone a thorough assessment of route alternatives, which is presented in ES Chapter 3: Assessment of Reasonable Alternatives [**APP-141**] and Chapter 5: Project Evolution and Alternatives of the Planning Statement [**APP-495**]. The assessment of route alternatives has taken into consideration impacts on 'local development plans' and 'planned development' alongside other constraints. The proposed design represents a sustainable solution to the need for the Project (as described in the Need for the Project [**APP-494**]) that meets operational requirements. ES Chapter 13: Population and Human Health [**APP-151**] provides an assessment of the Project impacts on residential development land: sites or proposals identified in national or local plans, policies or strategies for development, or land subject to planning permission. Planning Statement Appendix C: Local Authority Policy Review [**APP-498**] provides an assessment of the Project against adopted and emerging local plan policies, including allocations.

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			Chapter 7 of the Planning Statement [**APP-495**] sets out the identification and assessment of the Project's alignment and conformity with other matters that are potentially important and relevant, including national policy, local plan policies and allocations, and consideration of emerging local plan policy where appropriate. Chapter 7 identifies where the policies explicitly support the development of the Project.
		Comments expressing concern at the Project's cost and whether it provides value for money, and a suggestion that the stated benefit-cost ratio is too low.	Achieving value for money is one of the Scheme Objectives and a Value for Money (VfM) assessment has been carried out. As detailed in the Need for the Project [**APP-494**] it represents positive value for money as the substantial benefits of the Project outweigh the costs. The Economic Appraisal Report (EAR) within Appendix D: Economic Appraisal Package of the Combined Modelling and Appraisal Report (ComMA) [**APP-526**] describes the methodologies used to appraise the economic, environmental, social benefits, disbenefits, revenues and costs of the Project and presents the appraisal results. The appraisal informs the Project's VfM assessment. The appraisal, which uses outputs from the Lower Thames Area Model (LTAM) transport model, aligns with the principles in HM Treasury Green Book (HM Treasury, 2022) and is based on the methodologies in the DfT's Transport Analysis Guidance (TAG). The Applicant's position is that the Benefit Cost Ratio (BCR) of the Project is robust, measurable and has been undertaken in line with the DfT's Transport Analysis Guidance (TAG), as set out in the Combined Modelling and Appraisal Report [**APP-526**] The assured costs, as presented in the application, take into account labour, material and inflation. These adequately represent the Applicant's current position in relation to these cost items. The net scheme costs were assured by the Applicant in February 2022 as stated in Table 4.4 of the Combined Modelling and Appraisal Report, Appendix D [**APP-526**]. Further information is provided in Section 4.8 and Annex H of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**]
		Comments expressing concern that the Project has not considered alternative modes of transport, including rail	As set out in Section 5.3 of the Planning Statement [**APP-495**], the role that other transport modes might play in addressing congestion at the Dartford Crossing has been considered from the outset. The Project would create opportunities for public transport operators to develop new local and regional bus services, by providing new connectivity between Kent, Thurrock and Essex. Identification and development of these routes is the responsibility of the relevant operators. Local buses will not have to pay the user charge for the Lower Thames

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			Crossing, reducing operating costs for operators as is set out in Section 2.2 of the Road User Charging Statement [**APP-517**]. Further information is provided in Annex E.9 of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**]. The provision of a new rail freight crossing of the River Thames, or any other rail freight improvements, as an alternative to the Lower Thames Crossing is not a viable or realistic alternative to the Lower Thames Crossing because there are insufficient rail intermodal distribution terminals or other facilitating infrastructure to support a transfer from road to rail freight and it is unlikely this will change in significantly in the near future, as set out in paragraphs 5.3.9 and 5.3.17 of the Planning Statement [**APP-495**]. The provision of new passenger rail services crossing of the River Thames as an alternative to a Road Crossing is also not considered to be a viable or realistic alternative as set out in paragraph 5.3.16 of the Planning Statement [**APP-495**]. Further information is provided in Annex E.9 and Annex B.2 of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].
		Comments expressing concern that the Project would not provide greater connectivity with local roads	The main considerations for connectivity with the surrounding road network were likely journey origins and destinations, physical and environmental constraints, compatibility of junction location and type, and suitability for use on an All-Purpose Trunk Road. The desire to provide more local connections to and from the Project must be balanced against the need to ensure free-flowing connections with the SRN and safety for all road users. Other considerations are increased traffic on local roads arising from additional connections and increased environmental effects associated with large junctions. Where direct local connections are not provided, it is generally possible to connect to the Project by first joining roads on the SRN that are served by the proposed junctions. Further information on the Project's connectivity with the surrounding road network is provided in Section 4.5.3 of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].
		Claims that the Project's transport model does not reflect actual conditions or the impacts of the COVID-19 pandemic	To assess the performance of the Project, the Applicant created a simulation of the transport system in the Lower Thames area, called the LTAM. The transport model contains a detailed representation of the road network in the area and information on where people travelled to and from in an average month (March 2016) and uses an industry-recognised method of predicting future traffic flows and conditions. The DfT has issued Transport Analysis Guidance (TAG) on how transport models such as this should be built, and the extent to which the predictions can be compared to actual conditions. The

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			TAG was the basis for collecting data, building the model, and assessing its performance. The COVID-19 pandemic and its treatment with regards to the Project's transport model is set out at paragraphs 5.7.38 to 5.7.41 of the Transport Assessment (TA) [**APP-529**]. Due to changes in traffic flows as a result of the COVID-19 pandemic, data from after 2019 would not have been suitable for the Applicant's traffic modelling. The traffic model data is collated and used in accordance with DfT guidance. As mentioned in 5.7.40 of the TA, from 2021 onwards demand on the road network has largely returned to pre COVID-19 levels. Full details of the processes and checks carried out are in Appendix A: Transport Data Package [**APP-519**] and Appendix B: Transport Model Package [**APP-520**] of the Combined Modelling and Appraisal Report. An independent specialist assessor within National Highways concluded that the LTAM is suitable to assess the Project. In accordance with paragraph 4.5 of the NPSNN, the Applicant has developed an outline business case for the Project which aligns with HM Treasury's (2018) Green Book and the DfT's Business Case and TAG guidance. This business case has been shared with DfT. The Economic Appraisal Report is presented in the Combined Modelling and Appraisal Report Appendix D: Economic Appraisal Package: Economic Appraisal Report [**APP-526**].
		Comments expressing concern that the Project is not environmentally sustainable.	The Sustainability Statement [**APP-544**] recognises the importance of sustainability and sets out the key sustainability themes and outcomes for the Project. The intention is to embed sustainability into the Project through the preliminary design, direct specification, challenging contractors to promote sustainable outcomes or including them in the Register of Environmental Actions and Commitments (REAC). The REAC forms part of Environmental Statement Appendix 2.2: Code of Construction Practice (CoCP) [**REP1-157**]. The Project would also deliver a wide range of environmental and social benefits. These are discussed further in the Need for the Project [**APP-494**], the Benefits and Outcomes Document [**APP-553**], the Project Design Report [**APP-506** to **APP-515**], the Design Principles [**APP-516**], Environmental Statement Chapter 13: Population and Human Health [**APP-151**], and the Health and Equalities Impact Assessment [**APP-539**].

REP1-422 Stuart Dixon

<table>
<tr><th>Rep ID</th><th>WR Submitter</th><th>WR/Overview/Applicant's Response</th></tr>
<tr><td rowspan="2">REP1-422</td><td rowspan="2">Stuart Dixon</td><td>WR:
WR link: REP1-422</td></tr>
<tr><td>
Overview:
REP1-422 raised issues on the following topics:

Route alternatives and selection
Adequacy of consultation
Scheme objectives
Air quality
The role of statutory consultees
Climate compatibility

The following table provides the Applicant's responses to those issues.
<table>
<tr><th>WR summary</th><th>Response</th></tr>
<tr><td>Route alternatives, selection of a preferred route and the Scheme Objectives</td><td>The Project has undergone a thorough assessment of route alternatives, which is presented in Chapter 5 of the Planning Statement [APP-495]. Section 5.4 sets out the key stages that led to the selection of the Preferred Route Announcement by the Department for Transport (DfT), and subsequent reappraisal by the Project.
The Scheme Objectives are recorded in the Need for the Project [APP-494]. They were agreed between the Applicant and the Department for Transport, and include the requirement to relieve the congested Dartford Crossing and its approach roads.
Table 4.2 of the Planning Statement [APP-495] provides a summary of how the key benefits of the Project support the Scheme Objectives. The benefits of the Project are such that it is the right solution to the issues identified and the Project would support the Scheme Objectives.</td></tr>
<tr><td>Adequacy of consultation and weighting of opinions</td><td>The pre application consultation was carried out to the required standard as evidenced in the Consultation Report as ratified by the Planning Inspectorate in accepting the application.</td></tr>
</table>
</td></tr>
</table>

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
		Air quality, including PM2.5	The Applicant has assessed the air quality impacts of both the operation and construction of the Project in Environmental Statement (ES) Chapter 5 [**APP-143**], and proposed measures to manage these impacts where appropriate are outlined in the CoCP and REAC [**REP1-157**].
		Climate compatibility	The Project is setting out an industry-leading position in terms of driving out carbon in the preliminary design and setting a framework to continue to reduce its carbon impact through the commitments made in the Carbon and Energy Management Plan, which is one of three documents addressing carbon reduction in the DCO application: • Planning Statement Appendix I: Carbon Strategy and Policy Alignment [**APP-504**] states that '*the Project represents a step change in approach for a road scheme of this scale, in terms of the scope and nature of the measures which the Applicant is committing to deliver to reduce emissions during the construction and operation of the new road. Together with the policies which the Government has set out in its Decarbonising Transport Plan (2021), these measures ensure that the Project is aligned with a trajectory to net zero and that the Project's emissions would not therefore be significant, in accordance with relevant guidance.*' • Carbon and Energy Management Plan [**APP-552**] • ES Chapter 15: Climate [**APP-153**] Additionally, a review and the Project's response to legislation, policies and plans relevant to climate is presented in ES Appendix 15.1: Climate Legislation and Policy [**APP-480**]. A second iteration of the Carbon and Energy Management Plan [**APP-552**] would be used to demonstrate the implementation of the carbon commitments secured through the DCO during the construction phase and would set out the ways in which appointed Contractors would demonstrate that carbon emissions are kept within the defined limits. The Project has a commitment to implement the PAS2080 'Carbon Management in Infrastructure' standard, and each Contractor's plan would be refreshed annually to demonstrate it remains consistent with emerging best practice and aligned with their emissions pathway.

REP1-427 Trevor Thacker

Rep ID	WR Submitter	WR/Overview/Applicant's Response
REP1-427	Trevor Thacker	**WR:** WR link: **REP1-427**
		Overview: **REP1-427** raised issues on the following topics: • The Project would not alleviate congestion at the Dartford Crossing, would not achieve its Scheme Objectives and the cost is too high • Lack of adequate connections to the surrounding road network • A request to move the Stifford Clays Road Compound East • Concern over construction impacts on the surrounding areas • Impacts on farmland • Impacts on terrestrial biodiversity, including trees, hedges and wildlife • Impacts on Green Belt • Carbon emissions • Air pollution, including around the A13/A1089 junction • Noise pollution • Nitrogen deposition and compensation • Charging for the river crossing • Lack of cross-river active travel provision • Inadequacy of consultations • Criticism of the management of the Project The following table provides the Applicant's responses to those issues.

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
		WR summary	**Response**
		The Project would not alleviate congestion at the Dartford Crossing, would not achieve its Scheme Objectives and the cost is too high	The Scheme Objectives are recorded in the Need for the Project [**APP-494**]. They were agreed between the Applicant and the Department for Transport, and include the requirement to relieve the congested Dartford Crossing and its approach roads. Table 4.2 of the Planning Statement [**APP-495**] provides a summary of how the key benefits of the Project support the Scheme Objectives. The benefits of the Project are such that it is the right solution to the issues identified and the Project would support the Scheme Objectives. In Annex A of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**], Section A.2 explains how the reduction of traffic at the Dartford Crossing is linked to the benefits of the Project: '*To understand the performance of the Dartford Crossing, in scenarios with and without the proposed A122 Lower Thames Crossing (ie the Do Minimum and Do Something scenarios) it is the journey time benefits and the journey time reliability benefits that provide the means to understand the benefits of the project, and to assess whether the proposed new road would continue to provide relief to the Dartford Crossing into the future.*' Achieving value for money is one of the Scheme Objectives and a Value for Money (VfM) assessment has been carried out. As detailed in the Need for the Project [**APP-494**] it represents positive value for money as the substantial benefits of the Project outweigh the costs. The Economic Appraisal Report (EAR) within Appendix D: Economic Appraisal Package of the Combined Modelling and Appraisal Report (ComMA) [**APP-526**] describes the methodologies used to appraise the economic, environmental, social benefits, disbenefits, revenues and costs of the Project and presents the appraisal results. The appraisal informs the Project's VfM assessment. The appraisal, which uses outputs from the Lower Thames Area Model (LTAM) transport model, aligns with the principles in HM Treasury Green Book (HM Treasury, 2022) and is based on the methodologies in the DfT's Transport Analysis Guidance (TAG).
		Lack of adequate connections to the surrounding road network	The main considerations for connectivity with the surrounding road network were likely journey origins and destinations, physical and environmental constraints, compatibility of junction location and type, and suitability for use on an All-Purpose Trunk Road. The desire to provide more local connections to and from the Project must be balanced against the need to ensure free-flowing connections with the SRN and safety for all road

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			users. Other considerations are increased traffic on local roads arising from additional connections and increased environmental effects associated with large junctions. Where direct local connections are not provided, it is generally possible to connect to the Project by first joining roads on the SRN that are served by the proposed junctions. Further information on the Project's connectivity with the surrounding road network is provided in section 4.5.3 of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].
		A request to move the Stifford Clays Road Compound East	The proposed locations of construction compounds and other aspects of the construction plans for the Project were included in the Applicant's Community Impacts Consultation in 2021, which is documented in the Consultation Report [**APP-064**], along with issues raised in responses and the Applicant's consideration of them.
		Concern over construction impacts on the surrounding areas	The Applicant has produced an EIA to assess the environmental impacts of the construction and operation of the Project, including the impacts on local communities. The EIA is documented in the ES [**APP-139**] along with embedded mitigation within the Code of Construction Practice (CoCP) [**REP1-157**] and the Register of Environmental Actions and Commitments (REAC), which forms part of the CoCP. The Environmental Masterplan [**APP-159** to **APP-168**] is legally secured through Schedule 2 Requirement 5 of the draft DCO [**REP1-042**]. More information on how the Applicant would reduce impacts on local communities, properties and homes can be found in the CoCP, as well as the topic chapters of the ES, in particular ES Chapter 5: Air Quality [**APP-143**], ES Chapter 12: Noise and Vibration [**APP-150**] and ES Chapter 13: Population and Human Health [**APP-151**]. The Framework Construction Travel Plan [**APP-546**] sets out how the Project would seek to reduce the impact of its construction workforce on the road network by reducing the number of single-occupancy vehicle trips and encouraging the uptake of sustainable and active modes of travel. Chapter 8 of the Transport Assessment [**APP-529**] presents the Project's impact on the strategic and local highway networks, road safety, and local sustainable modes of transport, including public transport. It also sets out the impact of construction on the road network, including changes to existing traffic patterns as a result of predicted construction traffic movements and temporary traffic management measures. Measures to reduce and manage the impact of the Project's construction on the road network would be secured through the Framework Construction Travel Plan [**APP-546**], the outline Materials Handling Plan [**APP-338**] and the outline Traffic Management Plan

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			for Construction [REP1-174] which are secured through Requirements 10 and 11 of Part 1 of Schedule 2 of the draft DCO [REP1-042]. These control documents require the preparation of traffic management plans for construction and construction travel plans prior to the commencement of works.
		Impacts on agricultural land	Environmental Statement Chapter 10: Geology and Soils [APP-148] presents an assessment of likely significant effects on soil resources and BMV land. ES Appendix 10.4: Agricultural Land Classification Factual Report [APP-425] presents the outputs of the survey and has informed the baseline of ES Chapter 10. The Applicant has taken reasonable and practicable steps to minimise and mitigate for the likely significant effects. The design has been optimised to minimise the land take required to construct and operate the Project. The route optioneering phase and design development considered the presence of higher-quality agricultural land alongside other environmental and design constraints. Where agricultural land cannot be avoided, soil management measures to minimise the adverse effects of soil disturbance and handling during the construction phase are described in ES Chapter 10: Geology and Soils [APP-148] and secured through their inclusion in the REAC, which forms part of the Code of Construction Practice [REP1-157].
		Impacts on terrestrial biodiversity, including trees, hedges and wildlife	The effects of the Project on Terrestrial Biodiversity have been assessed within Environmental Statement (ES) Chapter 8: Terrestrial Biodiversity [APP-146] including assessments of designated areas, such as Sites of Special Scientific Interest (SSSIs), and ancient woodlands and veteran trees. It is explained in Section 8.3 of ES Chapter 8 that the assessment has regard to both direct and indirect impacts, including severance or fragmentation of habitats or wildlife corridors. ES Chapter 8 describes the magnitude of the impacts, and the measures proposed to avoid, reduce, and compensate for the effects on sensitive ecological receptors, including ancient woodland and veteran trees.
		Impacts on Green Belt	The Applicant has provided a detailed assessment of the Project and its impact on the Green Belt in Planning Statement Appendix E [APP-500]. This demonstrates that the Project is compliant with national policy which is permissive of 'inappropriate development' in the Green Belt in 'very special circumstances'.
		Carbon emissions	The Project is setting out an industry-leading position in terms of driving out carbon in the preliminary design and setting a framework to continue to reduce its carbon impact

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			through the commitments made in the Carbon and Energy Management Plan, which is one of three documents addressing carbon reduction in the DCO application: • Planning Statement Appendix I: Carbon Strategy and Policy Alignment [**APP-504**] states that '*the Project represents a step change in approach for a road scheme of this scale, in terms of the scope and nature of the measures which the Applicant is committing to deliver to reduce emissions during the construction and operation of the new road. Together with the policies which the Government has set out in its Decarbonising Transport Plan (2021), these measures ensure that the Project is aligned with a trajectory to net zero and that the Project's emissions would not therefore be significant, in accordance with relevant guidance.*' • Carbon and Energy Management Plan [**APP-552**] • ES Chapter 15: Climate [**APP-153**] Additionally, a review and the Project's response to legislation, policies and plans relevant to climate is presented in ES Appendix 15.1: Climate Legislation and Policy [**APP-480**]. A second iteration of the Carbon and Energy Management Plan [**APP-552**] would be used to demonstrate the implementation of the carbon commitments secured through the DCO during the construction phase and would set out the ways in which appointed Contractors would demonstrate that carbon emissions are kept within the defined limits. The Project has a commitment to implement the PAS2080 'Carbon Management in Infrastructure' standard, and each Contractor's plan would be refreshed annually to demonstrate it remains consistent with emerging best practice and aligned with their emissions pathway.
		Noise impacts	The Applicant has assessed the potential noise impacts from both the operation and construction of the Project and proposes mitigation measures to manage this impact. This is reported in ES Chapter 12 [**APP-150**] and the control measures are in detailed in the CoCP and REAC [**REP1-157**].
		Air quality impacts, including those around the proposed A13/A1089 junction	Air quality across the UK is improving generally. This is also evident in Thurrock. Thurrock's most recent annual status report (Annual Status Report on Air Quality in Thurrock (Thurrock Council, 2022)) covering air quality in Thurrock in recent years, states that there is a general trend of reduction in nitrogen dioxide (NO2) concentrations, which was evident even before the COVID-19 pandemic. The Project air quality assessment is presented within ES Chapter 5: Air Quality [**APP-143**] and has considered the impact of the Project on air quality. The Project is expected to lead to a reduction in traffic flows and congestion on the M25 between junction 2 and 29, and the A2 between M25 junction 2 and the M2/A2/A122 Lower Thames Crossing

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			junction, which would lead to an improvement in air quality. An increase in pollutant levels is predicted at receptors adjacent to the A122 Lower Thames Crossing route, but pollutants are predicted to be well below air quality objectives at receptors along this route, with the Project in operation.
		Nitrogen deposition and compensation	The DCO application provides 245ha of compensatory habitat, with details of the sites and how they were selected provided in the Environmental Statement (ES) Appendix 5.6: Project Air Quality Action Plan (PAQAP) [**APP-350**]. Nitrogen deposition compensation sites were selected using a site selection methodology developed in partnership with stakeholders including Natural England as explained in the PAQAP [**APP-350**]. Further information on the extent of the nitrogen deposition compensation is provided in Annex F of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].
		Charging for the river crossing	The decision to require eligible road users to pay a charge to use the tunnel section of the Project is in line with paragraph 3.25 of the National Policy Statement for National Networks (Department for Transport, 2014). Without prejudice to any decision by the Secretary of State on the grant of development consent, the Department for Transport has reviewed details of the proposed road user charging regime for the Project and has confirmed that they are in line with government policy. The Road User Charging Statement [**APP-517**] explains the road user charging powers that are being sought through the draft DCO [**REP1-042**]. This includes an explanation of why charges are considered necessary, how they would be set and how they would be enforced.
		Lack of cross-river active travel provision	The Applicant has considered a range of options during the development of the Project to provide improved cross-river provision for walkers and cyclists. The options investigated include using the tunnel, upgrading the existing ferry, relocating the ferry, building a separate bridge or cable car, and providing a shuttle service through the tunnel. These options were not taken forward for a variety of reasons including technical feasibility, operational issues, lack of commercial viability, cost, environmental impacts, and poor safety. Latent demand for walking and cycling across the River Thames at the Project crossing point is low and therefore unlikely to unlock enough trips to make the required infrastructure for a dedicated shuttle service economically viable. Page 48 of the Project Design Report Part G: Design Evolution [**APP-514**] provides further information. In addition, Section 5.3 in Chapter 5 of the Planning Statement [**APP-495**] provides an overview of the assessment undertaken on alternative modes of transport.

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			Further information is provided in Annex E.9 of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].
		Inadequacy of consultations	The pre application consultation was carried out to the required standard as evidenced in the Consultation Report as ratified by the Planning Inspectorate in accepting the application.
		Criticism of the management of the Project	The Applicant does not recognise this concern, the comment is noted.

REP1-432 Wayne Thacker

<table>
<tr><th>Rep ID</th><th>WR Submitter</th><th>WR/Overview/Applicant's Response</th></tr>
<tr><td rowspan="2">REP1-432</td><td rowspan="2">Wayne Thacker</td><td>WR:
WR link: REP1-432</td></tr>
<tr><td>Overview:
REP1-432 raised issues on the following topics:
• Environmental impacts
• Climate compatibility
• Costs of the Project
• Impacts on communities, including severance
• Impacts on Green Belt
• Impacts on agricultural land
• Public opinion being dismissed
• Vexatious treatment of landowners, including residents having to move home
• Modal alternatives
The following table provides the Applicant's responses to those issues.
<table>
<tr><th>WR summary</th><th>Response</th></tr>
<tr><td>Environmental impacts</td><td>The Application is accompanied by an Environmental Statement [APP-139] that provides evidence of the assessment of impacts and proposed mitigation measures associated with the Project, which has been prepared in accordance with published and agreed methodologies.</td></tr>
<tr><td>Climate compatibility</td><td>The Project is setting out an industry-leading position in terms of driving out carbon in the preliminary design and setting a framework to continue to reduce its carbon impact through the commitments made in the Carbon and Energy Management Plan, which is one of three documents addressing carbon reduction in the DCO application:
• Planning Statement Appendix I: Carbon Strategy and Policy Alignment [APP-504] states that 'the Project represents a step change in approach for a road scheme of this</td></tr>
</table>
</td></tr>
</table>

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
			scale, in terms of the scope and nature of the measures which the Applicant is committing to deliver to reduce emissions during the construction and operation of the new road. Together with the policies which the Government has set out in its Decarbonising Transport Plan (2021), these measures ensure that the Project is aligned with a trajectory to net zero and that the Project's emissions would not therefore be significant, in accordance with relevant guidance.' • Carbon and Energy Management Plan [**APP-552**] • ES Chapter 15: Climate [**APP-153**] Additionally, a review and the Project's response to legislation, policies and plans relevant to climate is presented in ES Appendix 15.1: Climate Legislation and Policy [**APP-480**]. A second iteration of the Carbon and Energy Management Plan [**APP-552**] would be used to demonstrate the implementation of the carbon commitments secured through the DCO during the construction phase and would set out the ways in which appointed Contractors would demonstrate that carbon emissions are kept within the defined limits. The Project has a commitment to implement the PAS2080 'Carbon Management in Infrastructure' standard, and each Contractor's plan would be refreshed annually to demonstrate it remains consistent with emerging best practice and aligned with their emissions pathway.
		Costs of the Project	Achieving value for money is one of the Scheme Objectives and a Value for Money (VfM) assessment has been carried out. As detailed in the Need for the Project [**APP-494**] it represents positive value for money as the substantial benefits of the Project outweigh the costs. The Economic Appraisal Report (EAR) within Appendix D: Economic Appraisal Package of the Combined Modelling and Appraisal Report (ComMA) [**APP-526**] describes the methodologies used to appraise the economic, environmental, social benefits, disbenefits, revenues and costs of the Project and presents the appraisal results. The appraisal informs the Project's VfM assessment. The appraisal, which uses outputs from the Lower Thames Area Model (LTAM) transport model, aligns with the principles in HM Treasury Green Book (HM Treasury, 2022) and is based on the methodologies in the DfT's Transport Analysis Guidance (TAG).
		Impacts on communities, including severance	Information about how the Project is expected to impact local communities and the steps the Applicant would take to mitigate those impacts can be found in the Community Impact Report [**APP-549**]. ES Chapter 13: Population and Human Health [**APP-151**] also assesses severance impacts of the Project.

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
		Impacts on Green Belt	The Applicant has provided a detailed assessment of the Project and its impact on the Green Belt in Planning Statement Appendix E [**APP-500**]. This demonstrates that the Project is compliant with national policy which is permissive of 'inappropriate development' in the Green Belt in 'very special circumstances'.
		Impacts on agricultural land	Environmental Statement Chapter 10: Geology and Soils [**APP-148**] presents an assessment of likely significant effects on soil resources and BMV land. ES Appendix 10.4: Agricultural Land Classification Factual Report [**APP-425**] presents the outputs of the survey and has informed the baseline of ES Chapter 10. The Applicant has taken reasonable and practicable steps to minimise and mitigate for the likely significant effects. The design has been optimised to minimise the land take required to construct and operate the Project. The route optioneering phase and design development considered the presence of higher-quality agricultural land alongside other environmental and design constraints. Where agricultural land cannot be avoided, soil management measures to minimise the adverse effects of soil disturbance and handling during the construction phase are described in ES Chapter 10: Geology and Soils [**APP-148**] and secured through their inclusion in the REAC, which forms part of the Code of Construction Practice [**REP1-157**].
		Public opinion on the Project being dismissed	The pre-application consultations were carried out to the required standard as evidenced in the Consultation Report, as ratified by the Planning Inspectorate in accepting the Application.
		Vexatious treatment of landowners, including residents having to move home	The Applicant has worked directly with affected landowners throughout the development of the proposals to convey information on how their land may be affected, understand their concerns and make adjustments where appropriate. Those affected by the Project may be entitled to make a claim for compensation, in accordance with the Compensation Code. Each claim for compensation would be considered on its own merits, in line with the Code. Further information about the compensation offered to those affected by the Project can be found in Compulsory Purchase and Compensation: guide 2 – Compensation to Business Owners and Occupiers and guide 4 – Compensation to Residential Owners and Occupiers (Department for Levelling Up, Housing and Communities). Guide 4 includes information about compensation for when the value of someone's home has been affected by the construction or operation of the Project.

Rep ID	WR Submitter	WR/Overview/Applicant's Response	
		Modal alternatives to the Project .	As set out in Section 5.3 of the Planning Statement [**APP-495**], the role that other transport modes might play in addressing congestion at the Dartford Crossing has been considered from the outset. The Project would create opportunities for public transport operators to develop new local and regional bus services, by providing new connectivity between Kent, Thurrock and Essex. Identification and development of these routes is the responsibility of the relevant operators. Local buses will not have to pay the user charge for the Lower Thames Crossing, reducing operating costs for operators as is set out in Section 2.2 of the Road User Charging Statement [**APP-517**]. The provision of a new rail freight crossing of the River Thames, or any other rail freight improvements, as an alternative to the Lower Thames Crossing is not a viable or realistic alternative to the Lower Thames Crossing because there are insufficient rail intermodal distribution terminals or other facilitating infrastructure to support a transfer from road to rail freight and it is unlikely this will change in significantly in the near future, as set out in paragraphs 5.3.9 and 5.3.17 of the Planning Statement [**APP-495**]. The provision of new passenger rail services crossing of the River Thames as an alternative to a Road Crossing is also not considered to be a viable or realistic alternative as set out in paragraph 5.3.16 of the Planning Statement [**APP-495**]. Further information is provided in Annex E.9 and B.2 Rail Alternatives of Post-event submissions, including written submission of oral comments, for ISH1 [**REP1-183**].

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